Immersive Equity: Encouraging Access to Immersive **Experiences for Portland's LGBTQIA+ Community** Submitted by Collin R. Pullum

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Introduction

Introduction

With the steadily increasing rise of new technologies dominating social conversation, there is an equal rise in ethical concerns around immersive technologies that utilize virtual reality (VR), augmented reality (AR), mixed reality (XR), or 360° video to provide new capabilities for users to experience virtual environments. As social media platforms and conglomerates face legislative confrontation with world governments after decades of non-regulation, there are certain lessons that can be applied with the rapid development of immersive technologies. Considerably, how is this software being programmed, and are the lived experiences of marginalized groups being considered in its development?

This terminal project aims to explore how emerging immersive technologies can positively benefit marginalized communities and provide avenues to allow members to receive equitable access to services and resources otherwise unavailable due to financial, geographical, or social barriers. University of Oregon

I will be examining how the Portland LGBTQIA+ community can benefit from access to immersive experiences, explore sentiment and desire to engage with immersive technology, and establish a working strategic communication plan that considers the values, barriers, and lived experiences of this population that places their community needs at the forefront in the development of these technologies.

The research presented here assesses if the LGBTQIA+ community in Portland, Oregon has a desire to participate in immersive experiences, what factors may prevent access to the use of this technology, and what potential ethical concerns or hesitations the community may have. This research will help inform the goals, objectives, strategies, and tactical recommendations on how a developer or organization can develop an LGBTQIA+ focused immersive event in Portland that provides reasonable benefit for the community while positively reinforcing the advantages of utilizing immersive technologies when experiences are crafted ethically.





Situation Analysis

Situation Analysis

Strengths

- Increasing equitable access to immersive technologies for Portland LGBTQIA+ individuals can empower the community to explore their identities in new, creative ways.
- The ability to use immersive technologies, such as VR or AR, remotely extends new avenues for creating safe spaces for LGBTQIA+ individuals that may face discrimination in physical environments
- Through the lens of embodiment theory, immersive experiences can figuratively allow users to step into the lives of LGBTQIA+ individuals and promote empathy and acceptance of the community.
- Immersive technologies can foster virtual spaces with no physical borders, allowing Portland LGBTQIA+ communities to engage and foster new connections on a larger scale.

Veaknesses

- Systemic disparities still exist that can largely affect access that the Portland LGBTQIA+ community has to immersive technologies (i.e., owning a headset, access to a smart device, etc.), including barriers such as finances and media/ technological literacy.
- Severe exclusion of LGBTQIA+ representation across media can permeate in immersive content and software, as well as potential for stereotypical or inauthentic depictions of the community.
- Breach of data privacy and information with immersive platforms and the leaking of that information could potentially endanger the lives of LGBTQIA+ individuals who conceal their identities for personal safety.
- Hesitation or skepticism of emerging immersive technology can prove challenging when trying to engage with the Portland LGBTQIA+ community.

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Opportunities

- Expansive opportunity to leverage immersive technologies as an education asset for LGBTQIA+ focused resources in areas such as healthcare, community development, queer history, and more.
- Collaboration with local Portland LGBTQIA+ organizations and business can help diversify immersive programming that accurately represents the queer experience.
- Increase in LGBTQIA+ immersive experiences can promote advocacy for LGBTQIA+ rights and increased awareness of social challenges this population experiences.
 - Improved access to immersive technology for the LGBTQIA+ community can lead to the creation of target initiatives that address specific needs for underrepresented communities, such as a mental health support.

hreats

- Increased chances for the development of immersive narratives that misrepresent the lived experiences of the LGBTQIA+ community if ethical considerations are not applied.
- Potential for misuse of these technologies to exploit vulnerable LGBTQIA+ populations.
- Discrimination, harassment, and violence is often perpetuated against LGBTQIA+ individuals in physical, digital, and immersive spaces. This is especially true for those with intersectional identities, such as transgender women of color.
- Continued development of immersive technologies without ethical guidelines or regulation may lead to harm or abuse, unintentional or not.















Key Publics

Through this research, I have identified three key publics that benefit from increased access to immersive technology and experiences: The Portland LGBTQIA+ community, the local LGBTQIA+ businesses that support this community, and immersive experience developers or content creators. All three are essential stakeholders that inform the goals & objectives, strategies, and tactics of this work.

The Portland LGBTQIA+ community:

Public 1, external, inactive, primary stakeholder

The LGBTQIA+ community in Portland, OR prides itself in being a diverse population and an entry point into queer culture in the Pacific Northwest. Portland has long had a reputation for supporting LGBTQIA+ rights and initiatives, often being a pioneer for including the community in legislative positions, such as Sam Adams, the first openly gay mayor to be elected in the United States in 2009. Despite being one of the more accepting regions and safe spaces for queer individuals in the United States, there are still disparities in access to immersive technology as a developing frontier. While critical mental support and health care resources for LGBTQIA+ members are abundant, there are still equitable challenges the community navigates with career services, activism, and other avenues that non-marginalized populations can access more readily.

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Local LGBTQIA+ friendly businesses/organizations in Portland, OR: Public 2, external, inactive, secondary stakeholder

With a city where queer culture positively emanates, there are a plethora of LGBTQIA+ friendly organizations that carry the inclusive values and openness that the community celebrates. Entities like The Q Center provide a centralized hub of resources for community members of all ages, backgrounds, and class status to ensure LGBTQIA+ members receive services such as health care, gender affirming care, community support workshops, sexual health resources, and more. LGBTQIA+ focused health facilities, such as Prism Health, operate as a one stop health services department for individuals to receive STI/HIV testing and sexual health supplies, health screenings, pharmacy access, immunizations, and other services at a reduced cost for community members that may not be able to locate or afford a health care provider. There is potential for immersive technology to enhance information about these services and resources for the community.

Immersive developers and content creators:

Public 3, external, active, secondary stakeholder

Immersive developers who help create the incredible experiences that allow users to virtually embody avatars and other characters stand to benefit the most from learning how to amplify and promote the narratives of LGBTQIA+ community members. As an immersive storyteller and content creator, it is becoming more critical to consider the ramifications and effects that these experiences may have on society, especially as conversation arise around the ethical concerns and skepticisms surrounding immersive technology. It is beneficial for this audience, as creators and storytellers, to help increase equitable access for marginalized groups (i.e, the LGBTQIA+ community) and seek their collaboration to enrich these narratives for all who choose to experience immersive virtual worlds.







When researching any established studies or relationships between immersive media and the LGBTQIA+ population, there was very limited information that could be found. Outside of a few applications in drag entertainment, there were only a few strategic uses of VR & AR technology that held considerations for LGBTQIA+ individuals or specifically serviced that population. However, studies had been completed on the benefits of virtual relationships. As immersive technologies become largely accessible, there is a case for virtual embodiment having a causal effect on an individual's behavior in the physical world, as Ceuterick (2021) proposes that the body "...is necessary to 'see, hear, feel, and interact within virtual worlds" and thus can mirror interactions and experiences in the physical realm (p. 92).

Some of the most promising examples of work I uncovered focused on using this concept of virtual embodiment to positively influence perception of queer culture and it's lived experiences, and promoting acceptance of not only queer community, but of marginalized populations as a whole. A fascinating example stems from the work of Maud Ceuterick who discusses examples of two pieces of queer immersive media, "Chez Moi" (Caitlin Fisher and Tony Vieira, 2014) and "Queerskins: Ark" (Illja Szilak, 2020), and how they utilize an unique approach of portraying queer media through a recollection of events in the actual world via a series of images and video on specific streets in Toronto, Canada, and in the state of Missouri in the U.S. (Ceuterick, 2021). University of Oregon

This cinematic and immersive storytelling aims to positively reinforce queer experiences through the transmission of personal memory "…in an embodied way, akin to how memory is transmitted between generations" (Ceuterick, 2021, p. 92). The use of cinematic VR & AR to encapsulate queer memory seems to be a bountiful medium for LGBTQIA+ focused storytelling.

Another positive example of the latest innovations in immersive technology is the development of the LGBTQ+ VR Museum, co-created by Antonia Forster and Thomas Terkildsen, a virtual space showcasing 3D scans of queer works or a "particular object and an accompanying voice message telling the story of it's significance" (Neale, 2022). The creation of the museum came to life when Forster realized there was no dedicated LGBTQIA+ museum in the United Kingdom. Forster described the project as "intensely personal" as she navigated her own journey of exploring bisexuality and polyamory (Neale, 2022).

Now an installed exhibit at the Queer Britain museum, the project is the most intrinsic example of a VR experience tailored to the queer perspective, developed away from the heteronormative and patriarchal lens that dominates sociocultural norms. It demonstrates a potential for marginalized populations, when given access to training and education, can create unique and personal virtual experiences that harnesses immersive media to push this new storytelling medium to new heights.



Similar use of VR & AR technology to help facilitate multicultural education and Students experienced scenarios in which they embodied a virtual avatar with characteristics of another ethnic group and were perceived by non-playable reduction of bias towards marginalized populations include a quantitative study completed by Elaine Hoter and Noa Shapira (2022), in which they provided characters (NPCs) who would discriminate or not approve of the student's virtual self, in efforts for students to experience what marginalized or oppressed people experiential learning course on the topic of intercultural education where 125 Jewish & Arab students living in Israel experienced being a member of a different social or experience. One example was students were placed in a scenario where they're ethnic group through VR simulations. Circumstances such as global migration, virtual avatar had a disability that required a wheelchair, and students would interact geographical mobility, and the increased globalization from the impacts of the in a world where accessible options were unavailable. Hoter and Shapira concluded that with proper intervention in virtual scenarios and roleplay, there is potential for internet and online communication has created a rapid increase of awareness for cultural diversity. As defined by Hoter and Shapira (2022), cultural diversity is experiential learning to positively influence and change stigma and prejudice that understood as "...any given country with ethnic, linguistic, and religious differences, individuals feel towards marginalized groups. and includes native-born minorities, homosexual or heterosexual persons, people of Other examples found included potential cases for VR in online dating and color, and people with disabilities" (p. 435).

Their work focused on employing methods of "online" or "indirect" contact with the students in virtual simulation that facilitated positive intergroup attitudes that used approaches other than face-to-face encounters between groups (Hoter & Shapira, 2022). Much like Ceuterick's analysis of queer cinematic VR & AR, Hoter and Shapira's work explored the "Proteus" phenomenon that occurs when the virtual world has an impact on an individual's behavior outside of that virtual world, based on a concept discussed in Social Learning Theory by Cody O. Karutz and Jeremy N. Bailenson (2015). University of Oregon

Other examples found included potential cases for VR in online dating and developing relationships. Brenda Wiederhold (2016) discusses how VR online dating provides safer avenues for LGBTQIA+ individuals to "meet" online that is not available with computer-mediated communication (CMC). She adds:

As CMC [computer-mediated communication] lacks the experiential richness of a face-to-face encounter, some important information about potential partners is impossible to glean from CMC alone; most users will want to meet a potential partner in person to integrate their CMC and face-to- face impressions into a coherent whole before pursuing a romantic relationship. VR helps by creating intimacy without requiring awkward or unsafe in-person meetings (p. 297).



Wiederhold (2016) continues that if VR continues to gain mainstream popularity, LGBTQIA+ community) can benefit from the avenues that immersive VR can open up. rejection. Upon reviewing the work that has been done to positively impact sentiment According to research by John Salerno et al. (2020), in the context of the to bullying for their sexuality.

LGBTQIA+ youth who reported higher levels of family rejection because of their greater safety barriers can be disseminated and all kinds of populations (including the identity were six times more likely to experience depression and eight times more likely to attempt suicide compared to LGBTQ youth who reported low levels of family Salerno's work called for greater recommendations and public health support for around LGBTQIA+ and marginalized populations, I uncovered ways that the community had been impacted by global events, most recently the ongoing COVID-19 pandemic. LGBTQIA+ youth that extended online mechanisms for this vulnerable population, The spread of the Coronavirus created causal effects that required society to isolate & either through K-12 schools or universities, that offered mental health counseling and quarantine in unprecedented numbers, and resorting to a heavy increase of online, resources that addressed this crisis. They stated, "Online mental health supports, such virtual communication to mitigate the risks associated with COVID exposure. as teletherapy and digital support groups, can help maintain external support in the absence of in-person access and may mitigate psychological burden" (Salerno et al., p. 723). Relating to the declining mental health of LGBTQIA+ youth, a similar epidemic COVID-19 pandemic LGBTQIA+ adolescents faced increased stress while receiving occurred in 2012, where the "It Gets Better" project was released to address the limited care and public health attention for various mental stressors, disorders, and drastic increase of young gay American students who were taking their own lives due other potential harms that they experienced. Some of the psychological harms reported included LGBTQIA+ youth being forced into home situations where they were unsafe or confined to staying with parents who were not supportive of their identity Amber Muller (2012) researched how the proliferation of communication technologies and the internet could have ramifications in the physical world, and while due to the stay-at-home orders that protected against the spread of COVID-19 immersive technology was not nearly as advanced back then as it is now, there are (Salerno et al., 2020). parallels to Muller's work that resonates with Hoter and Shapira's work with VR & AR in 2022.

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Conclusion

Muller (2012) analyzed the "It Gets Better" YouTube videos that Dan & Terry Savage, gay partners who wanted to share a message to young LGBTQIA+ students that their environment, community, self-esteem, and other characteristics could get better as they face the adversity they are experiencing in their young lives. Muller (2012) suggested that communities are essential to development of society, and new technologies have provided new mediums for communities to form without the need for "immediate periphery", the concept of physical direct contact and closeness to discover commonality, as seen by the real-world ramifications and community that developed surrounding the "It Gets Better" project. With some of the previous AR & VR work discussed in this review, there could be useful applications for immersive technologies that can be applied to benefit the health of wellness of the LGBTQIA+ community outside of just art or storytelling but provide immersive mediums that provide care and resources for those struggling with their identities or experiencing in their young lives.



Research

Research

Research Questions

- What kind of resources are the Portland LGBTQIA+ community lacking compared to other populations?
- Can immersive technology help fill gaps in the lack of resources within the LGBTQIA+ community in Portland?

Keywords

LGBTQIA+, immersive technology, virtual reality, augmented reality, mixed reality, 360° video, ethics, access, equity, qualitative, quantitative, mixed methods, Portland, Oregon

Abstract

challenges.

After further analysis, it is recommended that strategies are created that empower LGBTQIA+ individuals to participate and have greater access to immersive experiences. The author also asserts that additional research is needed to further explore other ethical considerations for immersive media to positively benefit the LGBTQIA+ community around the globe.

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As immersive technology continues to pervade mainstream conversation in global society, there is still general confusion on the potential avenues where this new medium can benefit society. Even greater gaps exist in how this technology can be ethically applied to positively reinforce the stories of LGBTQIA+ individuals. This research uses a mixed methods approach of qualitative interviews and a quantitative survey to analyze sentiment of immersive media and technology with the LGBTQIA+ population in Portland, Oregon, challenges the local community is facing, and if there is a desire for participation in this medium to help alleviate those

100%

of participants who had not participated in an immersive experience said they would be open to trying

Situation Analysis

- <u>HERE</u>
- Key Publics
- <u>HERE</u>

Literature Review

• <u>HERE</u>



Research Methods

To establish a framework around resources the Portland LGBTQIA+ community lacked These interviews were recorded and transcribed for later analysis. Candidates gave audible permission of their willingness to participate and for the recording of our access in, I utilized a mixed method approach, using qualitative interviews and a quantitative survey to help identify gaps in the research I uncovered, and help inform the conversation. Questions were framed around self-identity as a queer individual, an goals, objectives, and strategies of this project. To best answer my research questions, I anecdote they could share on their involvement with the LGBTQIA+ community, their own first held two (2) qualitative interviews with established activists and community members familiarity with immersive technologies, their experience and opinion on resources the local to Portland, Oregon. Based on the qualitative insights from these interviews, a queer community is lacking, and how immersive media can help close the gaps of access quantitative survey was distributed via social media. In this second phase, fifty one (51) that marginalized populations often do not receive. participants shared responses that gauged their sentiment and familiarity with immersive technology. Participants of the survey were given the option to note their city of residence, as well as self-identify as a member of the LGBTQIA+ community. This provided quantifiable data where I could compare responses from LGBTQIA+ members living in Portland, OR compared to the sentiment from all surveyors or non-LGBTQIA+ individuals.

The selection of these participants was from a convenience sample; however, I did not know the individuals on a personal level but had a previous awareness of their involvement in the community. One of the individuals was recommended from a participant in previous research project on understanding COVID-19's impact on the local Portland LGBTQIA+ community. I inquired with both individuals via a direct message on Instagram, For the interviews, both candidates were selected due to their involvement in local & where both participants agreed to meet. I stated an interest in understanding their state politics, nightlife, entertainment, and other areas that uplift and directly support perspective on the LGBTQIA+ community in Portland, Oregon, and that my research queer individuals in the Portland Metropolitan region. They also both self-identify as a part involved developing strategy around immersive technology but did not specify that this of the local community and have significant roots in Portland. These interviews were held study would examine sentiment on immersive media or their personal experiences within with the intent to determine qualitative insights that guided a quantitative survey to gather the community to avoid priming the subjects. further information on community desire and sentiment around augmented reality (AR), virtual reality (VR), 360° video, and other forms of immersive media.

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Research Methods

Both participants had the option to meet in-person or virtually, dependent on their Additionally, once these interviews were completed, the insights gathered from the comfort level. Participant 1 opted to be interviewed via Zoom, while I met Participant 2 conversations held with both participants helped inform a quantitative survey in-person at their place of employment (omitting location for anonymity). Both distributed via social media to gather data from a general population on current participants were asked the same set of questions, thirteen (13) total with the sentiment surrounding immersive media while giving LGBTQIA+ individuals the ability to share input, especially those living in Portland, Oregon. Those who identified as a part of opportunity to debrief about the experience and ask me any follow up questions. Both participants were encouraged to share as much as they were comfortable and could the community and were local to Portland were encouraged to take the survey, but all refuse any questions that made them uncomfortable or rescind participation at any time were welcome to submit data. With the exception of a question inquiring what city & state surveyors lived in, there were no questions that could identify any user. The survey with no consequence. As previously noted above, questions were formulated around understanding how the participants self-identify, both in their gender expression and as allowed for users to self-identify if they were a part of the LGBTQIA+ community but did an LGBTQIA+ individual, followed by their self-described hometown and how long they not require users to specify their sexual orientation and/or trans identity to be have lived in Portland, Oregon. considerate of personal information and felt the insights needed did not require that level of user data.

The following section of questions gave participants the opportunity to speak to their own experience and involvement with various communities in Portland, how they interpret the LGBTQIA+ community in their own words, and what kind of resources the community is lacking compared to other populations or groups. Lastly, participants were given the opportunity to speak to their familiarity with immersive technology (i.e., how much they have interacted with immersive media, anecdotes on experiences with immersive media, sentiment on the technology, etc.) and their perspective on how immersive technologies could best be applied to benefiting their local community, or if there is even a desire for LGBTQIA+ individuals to utilize this technology. University of Oregon

The online survey contains ten (10) questions that helps determine surveyor's understanding of immersive technologies (i.e., AR, VR, etc.), willingness to participate in an immersive experience (i.e., Would a surveyor consider spending money on an immersive experience, or is that a barrier?), and industries they could see immersive media applied to. The setup of the survey allows the ability to filter responses to individuals who identify as a part of the LGBTQIA+ community, as well as by region, so data can be analyzed with a macro lens of general population sentiment compared to understanding immersive media sentiment within the intended micro audience.



Research Methods

Challenges across methods were ensuring questions were inclusive of the range of experiences and identities of LGBTQIA+ individuals. I prepped significantly to ensure I provided enough distinction, respect, and sensitivity to any questions-both qualitative and quantitative—that inquired about the lived experiences of queer people or how one identifies. These were learnings I ascertained in previous qualitative research and wanted to ensure I maintained anonymity and respect for any participants in my research. There was also difficulty with the transcription services used to correctly capture the conversations I had with those interviewed. The service I used, Otter.ai, provided excellent audio capture and was able to properly differentiate the voices of the speakers, however had some trouble with capturing exact translations of the conversation, which took considerable time when reviewing in the ingest phase of my research.

Welcome. Help us increase immersive technology access for the Portland LGBTQIA+ **community!** Thank you for your participation in this questionnaire. This survey is being hosted by a graduate student from the University of Oregon's School of Journalism & Communication. We are trying to identify need & desire for immersive tech in the Portland LGBTQIA+ community.

The survey is completely confidential, and no name or identifying information will be associated with any completed responses. There is no consequence for not completing

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9:23

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.11 5G 75 9:23 Q4. Which answer best represents how familiar you are with immersive technology? (i.e., virtual reality, augmented reality, mixed reality, etc.) Virtual Reality (VR) O I don't know/prefer not to say O Not at all familiar Somewhat familiar Familiar O Very familiar

Augmented Reality (AR)



Interview Results

Both interviewed participants were willing to discuss their gender identity and Participant 2 identifies as a cisgender gay male and shared that majority of their ties to the LGBTQIA+ community in Portland, Oregon. In my first survey, Participant 1 involvement with the LGBTQIA+ community stems from work in activism and political identifies as a two-spirit individual, mostly from the perspective that they feel legislation in the support of LGBTQIA+ rights. They served extensive time on the board identifying as non-binary validates the existence of a gender binary and they prefer to for the Human Rights Campaign, as well as work with the current serving governor, Tina express themselves in many ways. When asked about how they would describe the Kotek. They shared that they have slowed down their involvement in activism to focus LGBTQIA+ community in Portland, they noted phrases such as "strong", "diverse", and on their own career and give room for younger generations of LGBTQIA+ individuals to "tight knit" and an ever evolving and growing space. Sentiment was overtly positive establish new traditions and develop their voice in the expanding conversations occurring around LGBTQIA+ rights currently under attack. Prior to the emergence of and hopeful despite describing Portland as a transient place. They expressed that this region as an "entry point" to queer culture in the west coast of the United States, often COVID-19, Participant 2 hosted monthly mixers for the community in Portland for being a cheaper location for queer individuals to move to in effort to leave a more LGBTQIA+ members to engage and connect with each other but have moved to conservative or midwestern background (much like their own experience). supporting the plethora of queer events that have resurged after the lifting of COVID-19 restrictions since early 2022.

Participant 1 has lived in Portland for eight years and has close ties with the nightlife community in particular, having hosted and produced many queer events in their time here. When asked about an anecdote of a memory where they felt attached to the community, they told a story of hosting their first Pride event in 2018. They began working at a local venue and had the opportunity produce their own show and felt this was a changing point where they were more involved with the Portland community.

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"...In the last couple of years, we have noticed a heightened sort of queerness and sort of acceptance and sort of more of a like... It's like flourishing. It's like a flower that's b — Participant 2





Identity and the LGBTQIA+ Community

When describing the Portland LGBTQIA+ community, Participant 2 had similar positive Participant 2 shared similar sentiment, noting sentiment and also described the group as "diverse". They expressed that the community accessibility and equity as important for the really celebrates allowing individuals to live authentically and experiment with gender community in these times. They asserted that Portland expression without repercussion, unlike many places around the world. Throughout our has greater healthcare resources for the LGBTQIA+ conversation, there was an urgency on how the community is under attack in various ways, community compared to other regions, but there are including legislation, violence, and other factors. gaps in equitable access in other areas. Other points discussed included acknowledgement of the violence One of the insights I wanted to capture from the qualitative interviews was, in the opinion being perpetuated to the transgender community in particular, and also the social isolation they felt LGBTQIA+ people were experiencing in Portland due to a more open, sexually liberating culture with open or non-monogamous relationships, etc.

maybe they wouldn't of those who partook, what are challenges the local LGBTQIA+ community is facing in have..." Portland, Oregon? My assumptions thought the focus of conversation would focus on issues such as the violence against transgender individuals and legislation across the country — Participant 1 targeting the rights of LGBTQIA+ individuals. However, a concurrent theme that stemmed from both of the interviews was overall access. Participant 1 discussed how one of the newer barriers that is being broken down revolves around ensuring LGBTQIA+ individuals of all kinds From their experience, they have worked with or befriended younger LGBTQIA+ are able to be in rooms where major decisions, funding, or political legislation are happening. individuals who often did not know what they wanted to do for a career and called out a They shared how they felt LGBTQIA+ individuals are conditioned to not see themselves in general lack of access for LGBTQIA+ focused career resources. They shared that while powerful positions, examples they used include governor, doctor, or lawyers. They expressed these resources do not necessarily have to be branded for just LGBTQIA+ individuals, they chipping away at these spaces, and capitalizing on a time where it is "cool" or "hip" to have a acknowledged a disparity of that community finding those resources, in their opinion. gay person in the room and pushing for allowing more queer or trans individuals to be in those positions is critical.

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"I'm really striving to try to get people to see themselves in these spaces in places that



Sentiment on Immersive Media

Both participants were familiar with various forms of immersive media, however had not had their own experiences using the technology or desire, citing hesitancy with ethical uses of immersive technology. Participants were more familiar with experiencing augmented experiences. Participant 1 had used a virtual headset once before but shared that they were overwhelmed with the sensory override that occurs in an immersive environment as they are an individual with autism. Participant 2 has never participated in a virtual reality experience of any kind (i.e., using a virtual headset, being immersed in a virtual space, etc.) despite having access to headsets at their place of employment. Despite having not used the technology, both participants shared sentiment that immersive media had utility for helping remove gaps in access that the community was facing so long as LGBTQIA+ individuals could be a part of the development of those experiences.

Participant 1 shared interest in giving the community more access to these technologies so that others can interact in spaces in the comfort of their homes. They recalled back to the imposed quarantine in 2020 due to COVID-19 and acknowledged that even now there are individuals who, for various reasons, are unable to safely participate in society as they are immunocompromised. They shared that the ability to still attend events and coexist with community in a virtual space is a major benefit and consideration for increasing access.

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Participant 2 initially stated they did not know how immersive technology could bridge gaps in accessibility for LGBTQIA+ individuals, but further conversation in our debrief prompted takeaways that led to additional insights. Participant 2 discussed education as a useful application, but shared sentiment that they still feel we have not seen the full potential of immersive technologies, specifically with virtual and mixed reality.

Survey Results

As mentioned in the methodology section, the survey was created using the insights gathered from the qualitative surveys. As of closing, the survey received 51 participant responses, 43.14% identifying as a man, 43.14% identifying as a woman, 11.76% identifying as non-binary, and 1.94% identifying as genderqueer. Of those taking the survey, 31 participants or 60.78% of individuals identify as a member of the LGBTQIA+ community. Of those 31 respondents, 17 live in Portland, Oregon (this is not including participants who live in Vancouver, Washington, which is regionally similar and in close proximity to the Portland Metropolitan region) making up 33% of total participants. 39.22% of total respondents did not identify as a member of the LGBTQIA+ community.







Survey Results (cont.)

When asked about familiarity with immersive experiences (i.e., VR, AR, XR, 360° video), About 77% (36) of respondents shared they were least familiar with mixed reality (MR), with 48.98% (24) sharing they were not familiar with augmented experiences (AR). Users were most familiar with virtual reality experiences, 56.86% (29) noting they were somewhat familiar, 19.61% (10) saying they were familiar. Of individuals who responded they were very familiar, virtual reality was the highest selected group at approximately 10% (5) of total respondents (51). In terms of general familiarity, 360° video was the highest in the "Familiar" category, potentially due to ease of accessibility in online digital spaces as well as virtual environments.

Roughly half (28) of respondents (about 55%) said they have had an immersive experience before, while about 45% (23) shared they have not, preferred to not say, or did not know. Of those who are an LGBTQIA+ member in Portland, 58.82% (10) of those select respondents said they have participated. Of that group who had not participated in an immersive experience before, all of the Portland-based LGBTQIA+ respondents said they would be open to trying one. When expanded to all participants who identified as an LGBTQIA+ member, no matter the region, the result remained the same. In fact, all 22 participants who were asked if they would be open to trying an immersive experience, like wearing a virtual headset, answered yes.



Survey Results (cont.)

Of the Portland LGBTQIA+ respondents who had tried an immersive experience, they were equally familiar with Pokémon GO, an application that leverages augmented reality to allow users to capture and interact with fictional creatures from the titular franchise as if they were in the physical world, and Snapchat, a social media platform that has grown in prominence with the range of AR filters users can access natively in app. Both were used/played by this group of respondents at 24.28% each. Of total respondents, similarly most were familiar with Snapchat's AR capabilities at 29.21%, then Pokémon GO at 20.22%, followed by 360° video at 16.85%.

Participants were asked about what industries they think immersive technology could be used in. The total pool of respondents selected arts & entertainment (20.98%, 47), gaming (20.54%, 46), and education (20.09%, 45) as the top three selected applications of immersive media. This proved similar when reviewing the selections of the Portland LGBTQIA+ respondents, with 20.48% (17) selecting arts & entertainment, followed by gaming and education equally selected at 19.28% (16). Across both the total survey population and the target audience, politics & government was the least selected field. One participant shared research development could be a field immersive media could be used in.



of LGBTQIA+ Portland surveyors are excited about the growing popularity of immersive technology

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Overall sentiment from the survey noted that a majority (42%, 21) of participants were somewhat excited about the growing popularity of immersive technology, with 20% (10) being very excited. 26% (13) neither agreed nor disagreed with the statement, while 8% (4) somewhat disagreed and 4% (2) strongly disagreed. Of the select group of Portland LGBTQIA+ participants, there was similar sentiment with 41.8% (7) of those users being somewhat excited and 11.76% (2) very excited. 29.41% (5) neither agree nor disagreed with the statement, while 17.65% (3) were somewhat not excited. No one in the LGBTQIA+ focused population strongly disagreed with the statement.

Lastly, surveyors were asked if they would be willing to pay to participate in an immersive experience to determine if money was a potential barrier to access of these technologies. In the total survey population, 38% (19) answered they would be willing to pay, while 44% (22) answered "Maybe" to the question. 18% (9) of total respondents said no. Comparatively, 41.18% (7) of the target audience group answered "Yes", and 47.06% (8) said "Maybe" to spending money to participate in an immersive experience. Only 2 respondents from this group said "No", which accounts for 11.76% of the target audience population.





Differences between LGBTQIA+ & Non-LGBTQIA+ Responses

Of the total 51 participants, 20 responded that they did not identify as part of the LGBTQIA+ community. Comparing survey answers between LGBTQIA+ and non-LGBTQIA+ members, there were not many differences between overall sentiment on immersive technology. The more notable difference stemmed from the ninth question when respondents were asked about excitement around the growing popularity of immersive technologies. Of the 20 Non-LGBTQIA participants, 50% (10) shared they were somewhat excited, while 20% (4) were very excited and strongly agreed with the statement. The greatest differences appear in negative sentiment, where 10% (2) of respondents strongly disagreed with the statement and were not excited. There were no LGBTQIA+ participants who strongly disagreed, only somewhat disagreeing at 13.33% (4).

Lastly, there was greater discrepancy between LGBTQIA+ and non-LGBTQIA+ participants regarding paying for immersive experiences. 50% (10) of non-LGBTQIA+ members said they were willing to pay for an immersive experience, compared to 30% (9) LGBTQIA+ participant who said "Yes". A higher percentage of LGBTQIA+ members said "Maybe" at 56.67% (17), potentially illustrating that finances may be a deterrent if LGBTQIA+ members have to pay to participate.



Research Discussion and Analysis

The described methodology helped provide a holistic analysis of my research questions and helped in affirming some of my early hypothesis on strategies for increasing access of immersive technologies for queer individuals, as well as challenging my assumptions that LGBTQIA+ individuals are more aware and cautious of the medium than I originally anticipated. I analyzed both qualitative conversations with a queer-focused lens, determining patterns in participant responses regarding sentiment around the city of Portland, benefits and challenges to immersive technology, and anecdotal perspective on how the LGBTQIA+ community can be best supported with ethical application of AR, VR, XR, and 360° experiences.

The Importance of Access

Despite queer culture becoming more frequent and popular in popular media, the topic of accessibility was very dominant in the conversations and data collected for this project. Initially, I made assumptions that immersive media could help increase access to fields like healthcare, education, and community involvement. However, after speaking with key members of the LGBTQIA+ community in Portland, it was clear that access itself was a key concern and driver for the population. The quantitative survey was in effort to capture if there was a desire for LGBTQIA+ individuals (specifically in Portland) to engage with immersive technology. With 100% of the target audience group who had never knowingly experienced an immersive experience being willing to try one was a motivating insight. Despite having smaller sample population of 17 Portland-based LGBTQIA+ individuals participating, that information demonstrated an interest for the community to participate with this media.

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Another critical insight surmised from the qualitative interviews was a desire for career-focused resources for LGBTQIA+ individuals. Both interview participants proposed an interesting suggestion that giving queer people the access and education to develop immersive experiences can help ensure that a greater population of people are creating immersive stories that reach greater audiences. Participant 1 shared hesitations with the sudden rise and use of immersive technology in the general public due to growing concerns of lack of ethical application in the frontier of virtual reality, augmented reality, and other immersive mediums (Slater et al., 2020) However, Participant 1 did have an openness to the technology being used to illustrate the stories of those who are queer or LGBTQIA+ identifying to educate wider audiences.

Participant 2 also noted having the LGBTQIA+ community given opportunities to learn & develop this technology could be an immense advancement in equitable access.

My interpretation of the interviews and collected data from the survey suggests that while there is a desire for the LGBTQIA+ community to engage with immersive technology, the potential avenues for how the technology can improve challenges the community is facing is somewhat unclear. Some key sentiments from the interviews suggested by both participants are that society has not been exposed to greater potential of these technologies in fields outside of gaming or entertainment. The survey results propose that respondents were less familiar of augmented reality compared to virtual reality, however that same population were more aware or had participated in a number of AR experiences compared to VR ones. When given suggestions of other fields, participants were open to its further application but had not initially seen the benefit of immersive technology in other fields until prompted.







Research Discussion and Analysis



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It was critical for this project to determine if there was desire from the community, but based on the collected insights I felt it was critical that the later goals, objectives, and strategies aim to increase collective access and opportunities for the Portland LGBTQIA+ community to engage in a plethora of immersive experiences and overall grow positive sentiment around the technologies so that the community feels empowered to assist in the further development of this technology and/or the experiences that can be developed with this medium.

Potential Applications

Participants across the qualitative interviews and surveys shared varying interpretations of how immersive media could be applied in many fields. In a way, this exercise illustrates immersive technology's vast potential as it enters mainstream society. As mentioned previously in the literature review, Ceuterick (2021) discussed promising examples of the use of immersive storytelling to engage audiences and reinforce positive queer narratives that are only now being spotlighted in contemporary media. Participant 1 provided a similar example previously mentioned, where a user could embody the life of an LGBTQIA+ individual and operate in a virtual environment where they could experience interactions from other characters, potentially non-playable characters (NPCs) who could represent various facets of queer life. They asserted that this should be created and developed by queer individuals to accurately represent and informative and positively reinforcing experience for users to participate in.





Potential Applications (cont.)

Another potential avenue suggested stemmed from an insight from Participant 2, who shared utilizing immersive media as a healthcare tool to increase access to LGBTQIA+ focused therapy and counseling care as they face a greater number of anxieties and detriment to their mental health than other marginalized populations. This suggestion is reinforced by Salerno (2020) who discussed how the COVID-19 pandemic exacerbated the stress LGBTQIA+ youth experienced due to an immense lack of curated resources limited due to the effects of the pandemic as a whole. They recommended an increase of digital resources that provided effective and target counseling for this population, and immersive media could play a role here if effectually incorporated into healthcare, potentially with the plentiful LGBTQIA+ practices already available in Portland.

More broadly, a survey participant wrote in research development as a viable field for immersive technology, one of the few surveyed to utilize the text entry option. A literature analysis completed by Ayoung Suh and Jane Prophet (2018) suggests that while immersive technologies are rapidly expanding, there are plentiful gaps that are not addressing methodology for immersive technology research. This suggestion from the participant provides an interesting insight worth exploring in a greater scope of this project.

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Across survey groups, both the total surveyed and specifically the target audience of Portland LGBTQIA+ individuals, there were not any notable differences or trends between both sample groups on overall sentiment and attitudes towards immersive media. It is notable that the smaller sample of LGBTQIA+ Portland-based respondents answered in similar fashion, so a project or inquiry on a greater scale is worthwhile to deduce if there is a difference in sentiment between LGBTQIA+ individuals with immersive media compared to a general, random sample population. This data shows not, but critical to note that the sample of LGBTQIA+ self-identify individuals that participated in the survey and live in Portland, Oregon was 17 individuals when compared to the full 51 participants.

Overall, this research provided unique insights on applications of immersive technology. It is my recommendation that it is worth exploring potential uses of VR, AR, XR, and 360° video applications that are developed and created by LGBTQIA+ individuals, for their benefit, and ethically centers and positively humanizes their lived experiences in fields like entertainment, education, healthcare, and community development.



Conclusion

A mixed methods approach was beneficial in gathering the necessary qualitative insight from two willing participants and key activists in the LGBTQIA+ community in Portland, Oregon to establish a proactive understanding of need and desire for immersive technology. Many of my initial assumptions were challenged, as the research provided the key idea that access to use and understanding of immersive technology *is* the challenge for the Portland LGBTQIA+ community, versus a factor in a host of other social challenges that the community is facing locally and around the globe.

The quantitative survey provided a baseline sentiment for understanding that holistically, there is a desire for LGBTQIA+ people to participate in immersive experiences, whether virtual, augmented, or in 360° video. It also demonstrated less familiarity with mixed reality technologies, and general understanding of the difference between immersive experiences. As previously stated, I recommend that strategies should be implemented that consider factors of increasing access, education, and awareness of immersive technologies that positively benefits the LGBTQIA+ community in Portland, Oregon and exploring further research that can identify benefits of these technologies for LGBTQIA+ individuals around the globe.

Additionally, it is critical that LGBTQIA+ individuals are included in the development of these experiences so that there can be greater access to careers and opportunities with this budding technology, and support ethical considerations for including marginalized groups in the building of this expansive medium. University of Oregon



Goals & Objectives

Goals & Objectives

GOAL 1: To increase access and awareness of immersive technologies (i.e., virtual reality, augmented reality, mixed reality, etc.) to the Portland LGBTQIA+ community.

• Objective 1: (Awareness) Provide three (3) digital resources for LGBTQIA+ individuals in Portland to learn & discover local immersive experiences by June 2023.

• Objective 2: (Action) Develop two (2) in-person opportunities for Portland LGBTQIA+ community members to participate in an immersive virtual experience by December 2023.

• Objective 3: (Acceptance) Positively increase sentiment of immersive media with LGBTQIA+ individuals by 20% by March 2024. University of Oregon

GOAL 2: To provide a strategic framework for building an immersive experience that ethically considers LGBTQIA+ individuals at the forefront.

• Objective 1: (Awareness) Increase overall representation of the LGBTQIA+ community in immersive experiences by ensuring at least 50% of the narrative, characters, and content includes LGBTQIA+ identities and lived experiences.

• *Objective 2: (Action)* Collaborate with two (2) LGBTQIA+ organizations or businesses in Portland to partner with and build an immersive experience that centers around the community's values and needs.

• Objective 3: (Acceptance) Implement a measurable user engagement survey to note community satisfaction with immersive experiences, aiming to increase participation amongst 30% in the LGBTQIA+ community in Portland by the end of 2023.





Strategies

STRATEGY 1:

Develop an informative digital presence that centralizes information on immersive technology for a Portland LGBTQIA+ audience.

Description: According to a media habits survey distributed the Collage Group (2022), LGBTQIA+ Americans have a higher media consumption rate compared to other Americans and are likely to use social media as avenue of expression and finding community. It is critical to meet this audience on prominent social media channels to provide resources that empowers the Portland community to find LGBTQIA+ friendly immersive events and the organizations hosting them. To Portland's benefit, there is a significant presence of LGBTQIA+ businesses and organizations that could collaborate with these channels to provide up-to-date information on immersive events, experiences, or resources that the community can participate in.

Goals & Objectives Addressed

- GOAL 1: To increase access and awareness of immersive technologies (i.e., virtual reality, augmented reality, mixed reality, etc.) to the Portland LGBTQIA+ community.
 - Objective 1: (Awareness) Provide three (3) digital resources for LGBTQIA+ individuals in Portland to learn & discover local immersive experiences by June 2023.
 - Objective 3: (Acceptance) Positively increase sentiment of immersive media with LGBTQIA+ individuals by 20% by March 2024.

Strategies

Key Publics Reached: This awareness strategy will enable us to reach LGBTQIA+ interested in immersive media and sharing information with of other local LGBTQIA+ organizations local to Portland.

Media: It is recommended to use a multi-channel approach on platforms such as Instagram, Twitter, TikTok, and YouTube that support visual content and text mediums.

Key messages: This awareness strategy will empathize the following key message: *Immersive experiences and resources exist for LGBTQIA+ community members in* Portland, Oregon and are available for anyone interested.

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STRATEGY 2:

Craft a local LGBTQIA+ immersive experience and/or event with local businesses/organizations that align with community need.

Description: Several LGBTQIA+ organizations, like the Q Center and Prism Health, provided critical and affirming services for community members in Portland. There is an immense opportunity to craft immersive experiences that can serve to entertain and educate the LGBTQIA+ on health services and community resources readily available through an immersive medium. Collaborating with a local organization to provide an immersive event is an excellent avenue to build interest in immersive media while simultaneously building community and introducing stakeholders to LGBTQIA+ resources available in their region that may not have known about.

Goals & Objectives Addressed

- GOAL 1: To increase access and awareness of immersive technologies (i.e., virtual reality, augmented reality, mixed reality, etc.) to the Portland LGBTQIA+ community.
 - Objective 2: (Action) Develop two (2) in-person opportunities for Portland LGBTQIA+ community members to participate in an immersive virtual experience by December 2023.
 - Objective 3: (Acceptance) Positively increase sentiment of immersive media with LGBTQIA+ individuals by 20% by March 2024.
- GOAL 2: To provide a strategic framework for building an immersive experience that ethically considers LGBTQIA+ individuals at the forefront.
 - **Objective 1: (Awareness)** Increase overall representation of the LGBTQIA+ community in immersive experiences by ensuring at least 50% of the narrative, characters, and content includes LGBTQIA+ identities and lived experiences.
 - Objective 2: (Action) Collaborate with two (2) LGBTQIA+ organizations or businesses in Portland to partner with and build an immersive experience that centers around the community's values and needs.

³⁷ Strategies

Key Publics Reached: This action strategy enables us to reach local LGBTQIA+ stakeholders who have interest or have not participated in an immersive experience before, as well as Portland community organizations/ businesses who provide services to LGBTQIA+ members.

Media: This communication strategy will use a mixture of social media channels such as Instagram, Twitter, and TikTok, as well as interpersonal media channels of partner businesses such as printed graphics (i.e., flyers, posters, etc.) at the location of the organization.

Key messages: This action strategy will emphasize the following message: Portland LGBTQIA+ organizations are willing to provide immersive media experiences that offers the local community other avenues to engage with resources and queer community members.

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STRATEGY 3:

Develop content guidelines for LGBTQIA+ immersive experiences and a mechanism for evaluating user engagement & satisfaction

Description: As immersive technology continues to expand around the world, it is even more vital and timely to establish ethical content guidelines that positively reinforces the lived experiences of LGBTQIA+ individuals. While the storytelling potential of immersive experiences feels boundless, the sociocultural and system issues that permeate society still exist and are programmed into this technology, knowingly or unknowingly. Recognized guidelines, alongside a methodology for gathering qualitative and quantitative feedback from LGBTQIA+ community members are essential for the enhancement of future immersive experiences that celebrate this population.

Goals & Objectives Addressed

- GOAL 1: To increase access and awareness of immersive technologies (i.e., virtual reality, augmented reality, mixed reality, etc.) to the Portland LGBTQIA+ community.
 - Objective 1: (Awareness) Provide three (3) digital resources for LGBTQIA+ individuals in Portland to learn & discover local immersive experiences by June 2023.
- GOAL 2: To provide a strategic framework for building an immersive experience that ethically considers LGBTQIA+ individuals at the forefront.
 - **Objective 1: (Awareness)** Increase overall representation of the LGBTQIA+ community in immersive experiences by ensuring at least 50% of the narrative, characters, and content includes LGBTQIA+ identities and lived experiences.
 - Objective 3: (Acceptance) Implement a measurable user engagement survey to note community satisfaction with immersive experiences, aiming to increase participation amongst 30% in the LGBTQIA+ community in Portland by the end of 2023.

Strategies

Key Publics Reached: This acceptance strategy enables us to reach immersive media developers, storytellers, and content creators who are crafting an experience for LGBTQIA+ individuals. This also allows us to reach LGBTQIA+ individuals interested in getting involved with developing immersive technologies and experiences as well.

Media: These guidelines should be shared as an open-source deliverable that can be easily distributed digitally or printed. This can be distributed via an electronic newsletter, email, as well as packaged for social media audiences.

Key messages: This acceptance strategy will emphasize the following message: *Immersive media developers and practitioners should utilize these ethical guidelines* when designing immersive experiences for LGBTQIA+ individuals to positively reinforce the lived experiences of this population.

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Tactics

Tactics Strategy 1 Tactics



Hub, Portland's first LGBTQIA+ resource for information on local immersive experiences for our community! We are overjoyed to officially launch our Instagram channel, and there is so much more on the way. Give us a follow and stay tuned for future updates on how you can get involved with VR & AR immersive events! #immersivepridehub #LGBTQIA+

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STRATEGY 1 TACTICS:

Develop an informative digital presence that centralizes information on immersive technology for a Portland LGBTQIA+ audience.

• Create an Instagram page dedicated to Portland immersive experiences for LGBTQIA+ people

• TikTok page for video & visual media

• Informative website to house information for local LGBTQIA+ friendly immersive events

• Partner tag with LGBTQIA+ friendly organizations in Portland to expand presence

Online newsletter

• Template Graphic Kit (Digital distribution)

It is imperative to communicate with LGBTQIA+ audiences in the digital spaces where they frequent. Social media is an oftencritical tool to disseminate information while simultaneously being a forum for individuals to engage. As a prominent and popular visual platform, Instagram is becoming increasingly useful for any business or organization to provide information on events, resources, and initiatives available for LGBTQIA+ individuals.

Portland, Oregon is particularly saturated with a large population of LGBTQIA+ individuals, and a popular region for the community to gather for queer events of all kinds (drag performances and entertainment, nightlife events, mixers, community resources, gender affirming care and sexual health testing, etc.), so any information on LGBTQIA+ friendly immersive events are likely to be well received.

Messaging for the Instagram page should be informational and speak to the voice and values of the community, and willing to address ethical concerns surrounding immersive technologies. Visual mediums, such as colorful template graphics can be particularly effective in quickly sharing resources for interested individuals to learn more of how to get involved or participate in an immersive event and celebrate inclusivity for all individuals in the community.

Any video content developed for Instagram can be easily repurposed to a TikTok page, however there are also opportunities to develop human-first content that works effectively on the platform. This kind of short form content can quickly grab attention of LGBTQIA+ individuals who are unaware of immersive experiences or may have interest but unsure of opportunities for involvement.

There are a number of LGBTQIA+ individuals in Portland with varying gender expressions, sexual identities, and lived experiences that are likely not represented in mainstream media and culture, so it is critical to utilize gender inclusive language to not alienate anyone from participation.

Operating a website that can house these resources can be effective in the event that other social media owned channels are not functioning properly, so individuals can always have access to up-to-date events and experiences. Partnering with Portland organizations can be effective in increasing audience awareness, and a digital newsletter can also be easily distributed bi-weekly to quickly share updates and not overwhelm inboxes.





Tactics Strategy 2 Tactics

STRATEGY 2 TACTICS:

Craft a local LGBTQIA+ immersive experience event with local businesses/organizations that align with community need.

- Partnering with two (2) organizations to develop an intentional immersive experience using virtual reality, augmented reality, or other avenues that align with LGBTQIA+ community values.
- An event at the Oregon Museum of Science and Industry (OMSI) with the Teen Tech Center
- Utilizing the Oregon Reality Lab at the White Stag Campus for an informative event
- Q Center collaborative immersive experience
- Portland Drag AR Performance with Snapchat

Another incredible benefit for the Portland LGBTQIA+ community is the plethora of organizations available for individuals of all walks of life. Establishments like the Q Center on Mississippi Avenue or Prism Health in Southwest Portland provide pertinent social and health support services. A collaborative immersive experience that educates LGBTQIA+ individuals on a service, demonstrates unity and community, and provides opportunity to use a virtual headset or augmented device if they have not had the chance to use one before.

Dependent on the resources available at the organization, there is potential to outsource these events to spaces where immersive technology is plentiful, much like the Oregon Reality Lab at the University of Oregon's White Stag Campus, or the OMSI's Teen Tech Center that houses virtual headsets as well. These education-centered spaces are great candidates for providing a cost-effective immersive event for LGBTQIA+ individuals, and both are located in accessible areas of the city with public transportation options (i.e., the MAX Light Rail service, etc.).

Portland is also significant for its abundant drag community, with frequent events that celebrate expressive drag performances from significant community members. There is potential to collaborate with a local drag performer to develop an AR experience that can be created on a visual platform, such as Snapchat or TikTok, that enhances a live experience while supporting a local drag artist or talent. Applying an AR experience with LGBTQIA+ people mind using an application many users may already be familiar with is a great entry point for queer individuals to participate with immersive media. Platforms like Snapchat employ free AR development tools, such the Snap AR Lens Studio, where users can craft their own AR filters and experiences. Empowering LGBTQIA+ community members to utilize this technology to craft a special performance, where users can film, share digitally with other users and online, and even tip or monetarily support a performer is a unique opportunity that is cost effective compared to needing VR hardware to develop immersive content in virtual reality.

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Tactics Strategy 3 Tactics



- Ensure authentic representation!
- Consider intersectional identity and accessibility

An insight uncovered from this research demonstrated the hesitancy for LGBTQIA+ involvement with immersive technologies as they rapidly develop with little to no regulation, and marginalized populations are often an afterthought when considering ethical harm, whether intended or not. It is critical that developers of immersive experiences are receptive to conversations that can increase harm reduction in VR, AR, XR, 360° video, and other budding experiences that consider the involvement of populations like the LGBTQIA+ community.

At the forefront, it is recommended to consider the plethora of lived and authentic stories of Portland LGBTQIA+ individuals, and how those stories can contribute to raw and compelling narratives that are human centered in an immersive experience. It is noteworthy that there is not one version of an LGBTQIA+ experience, so considerations for intersectionality and the unity of racial background, ethnicity, social class, wealth status, ability, neurodivergence, and other factors can contribute to ones lived experience.

Many topics surrounding the lived experiences of LGBTQIA+ people are often challenging and may trigger difficult memories or feelings for individuals, so it is imperative to approach the creation of any immersive experience with sensitivity and respect, especially when crafted with LGBTQIA+ individuals in mind. The use of inclusive language and messaging is also beneficial to ensure users feel represented and safe in an immersive space. The ability to navigate emotion and empathy through characteristics of embodiment makes immersive media a powerful and essential tool, and this can overwhelm populations if not developed carefully. If these experiences touch on challenging topics (i.e., homelessness, substance abuse and addiction, sexual harassment and violence, discrimination, bullying, etc.) it is the responsibility of the developer to announce a sensitive content warning prior to involvement in that experience...

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STRATEGY 3 TACTICS:

Develop content guidelines for LGBTQIA+ immersive experiences and a mechanism for evaluating user engagement & satisfaction.

- Collaborative approach
- Inclusive language and messaging
- Sensitivity and respect
- Handle data and privacy with immense care
- Hold space to learn and develop with community
- Ensure mechanisms to evaluate and assess







Tactics Strategy 3 Tactics



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STRATEGY 3 TACTICS (cont.):

Develop content guidelines for LGBTQIA+ immersive experiences and a mechanism for evaluating user engagement & satisfaction.

- Ensure authentic representation!
- Consider intersectional identity and accessibility
- Collaborative approach
- Inclusive language and messaging
- Sensitivity and respect
- Handle data and privacy with immense care
- Hold space to learn and develop with community
- Ensure mechanisms to evaluate and assess

...as noted previously, the data and privacy for any user should be handled with extreme care. This is particularly important for the LGBTQIA+ community, as various members may not share aspects of their identity publicly in the event it is unsafe for the to do so or may cause physical or psychological harm. Ensuring firewalls are in place to protect user data should be a priority for any organization hoping to craft an immersive experience.

Lastly, just as immersive media is swiftly evolving over time, communities are thoughtfully evolving over time. Language changes and taboo topics become societal norms, and the LGBTQIA+ is not an outlier. I recommend that methodology is in place to record user satisfaction and feedback with LGBTQIA+ individuals to learn and improve these immersive experiences. Sharing a pre-survey to gather sentiment before users wear a headset or utilize an augmented filter, and then providing a post-survey can be an effective tool at events for users who have never participated in immersive mediums before. Ensuring sections where users can submit feedback in their own words can offer critical qualitative insight unable to be pulled from quantitative data. These methods can ensure that developers and content creators are holding space to collaborate with the LGBTQIA+ community and audiences they are attempting to reach.





Budget

Budget

Strategic Recommendation	Tactic	Cost (USD)	Tactic Total
Strategy 1: Awareness Campaign (Digital Presence)	Create Instagram Organization Page	\$0, < 1 day	\$712
Goals & Objectives Addressed: Goal 1 (Objectives 1 & 3)	Create TikTok Business Page	\$0, < 1 day	
TIMEFRAME: 3 month(s)	Develop website to house information for local LGBTQIA+ friendly immersive events (via Squarespace)	\$192 annually	
	Partner tagging with local LGBTQIA+ organizations in Portland to expand presence	\$0, 2x two weeks apart	
	Online newsletter	\$0	
	Design social media assets (post copy, deliverables)	\$0, > 2 weeks	
	Create template graphic kit	\$0, > 2 weeks	
	Boost Instagram posts \$0.50 = Avg. cost per click (CPC) per 1,000 impressions, \$10/week	\$260	
	Boost TikTok posts \$1 = Avg. cost per click (CPCP per 1,000 impressions, \$500 minimum spend per campaign	\$500	
	Adobe Express free subscription (to develop brand logo, social media assets, video content)	\$0	
Strategy 2: LGBTQIA+ immersive experiences with Portland community	Partner with/book Turbine Hall & Teen Tech Center space for immersive event at the OMSI*	\$3,500	\$7,375
Goals & Objectives Addressed: Goal 1 (Objectives 2 & 3), Goal 2	Event at Shirley Papé Forum/Oregon Reality Lab at the UO White Stag Building (minimum 4 hrs.)*	\$675	
(Objectives 1 & 2)	Stipend to collaborate with a local drag artist to develop an original AR experience (through Snap AR Lens Studio)	\$1000	
TIMEFRAME: 6 month(s)	Stipend for a collaborative immersive experience with the Q Center (partner tag, posting pre-event digital content, sharing with the community)	\$1000	
	Meta Quest 2 Headset (\$299.99 MSRP) x 4 (available in the event partner business do not have access to VR hardware)	\$1,200	
Strategy 3: LGBTQIA+ immersive ethics guide	Craft inclusive ethical guidelines on how to create immersive content for LGBTQIA+ focused experiences	\$0, > 2 months	\$0
Goals & Objectives Addressed: Goal 1 (Objective 1), Goal 2 (Objectives 1 & 3)	Develop pre/post user satisfaction survey to evaluate engagement at partner immersive events (via SurveyMonkey)	\$0, > 1 week	
TIMEFRAME: 3 month(s)	Distribute guidelines via organization website, newsletter, and owned social media channels	\$0, > 2 weeks	
	*Location has access to immersive (AR, VR, XR, etc.) hardware and accessories	TOTAL	\$8,087





Timeline

Timeline

This proposed timeline considers several development periods organized to help the line for content creation.

J609 Terminal Project University of Oregon The individual project phases are as follows: Digital Presence Development, Template Graphic Kit Creative Development, LGBTQIA+ Immersive Ethics Guide ensure efficiency of a campaign rollout when crafting events for the LGBTQIA+ community. The hope is this planned timing can allow any individual who wants to Development, and example timing for two (2) potential immersive events for the Portland LGBTQIA+ community. The order of these phases ensures that any reach the Portland community will have a step-by-step order in which they can develop a welcome digital presence for LGBTQIA+ plus individuals unaware of the stakeholder can properly craft an owned media presence for a social media page and website, then developing a template graphic and branding kit for easy reference down benefits of immersive tech by first establishing a network of owned media channels. The timeline (linked here) is built in a Gantt chart style to provide a visual aid on duration of timing for each tactical recommendation. Importantly, before the development of any immersive event/experience, there is The timeline notes the task, followed by project start & end dates and the development time to establish an ethical code or guidelines that acknowledges and prioritizes the inclusion of LGBTQIA+ individuals. This development timing begins in calculated days for that particular activity. Project days are visualized and color coded by month, spanning a 6 month period starting in June to November 2023. The chart parallel with some of the owned channel development to ensure there is ample time also easily demonstrates which projects are being executed in parallel. Lastly, a status for stakeholders to pursue the necessary research to explore what guidelines are already in place and gaps missing and timing for qualitative research to gather tracker is added next to each corresponding project so individuals can easily note if an item is planned, in progress, on hold, completed, or past due. additional insight from LGBTQIA+ participants. Afterward, there is a week of timing to develop a framework outline, and time for community partners and stakeholders to Each phase considers a process of a formal kickoff, to ensure any stakeholders review. Lastly, about two (2) weeks of content development time is allotted for can meet and form alignment on the goals, objectives, and strategies before stakeholders to build the LGBTQIA+ immersive ethics guidelines, and secure alignment executing creative development. At least two (2) reviews are allotted to ensure any with community stakeholders before distributing across owned channels. feedback can addressed in the second and final round. Final due dates for any It is important to note that despite completion, time should be committed to deliverables are noted, as well as live dates for event announcements, partner tagging (announcements & reminders), and event days as noted previously in the tactical allow ongoing community engagement and proper forums to receive feedback that

recommendations.

could improve the framework of the ethical guidelines.

Timeline (cont.)

Lastly, once the guidelines are completed, the timeline moves into the last phases proposing recommended cadence for the development of an immersive event for the LGBTQIA+ community in Portland. The recommended timing allows for a little over a month to execute an event with partner organizations and collaborators. Event one is an example of a partnership between The Q Center & University of Oregon to craft an open house event for LGBTQIA+ individuals to engage with immersive tech if they haven't before. The event begins with a kickoff, followed by creative development of social announcement assets, pre/post-event survey, and other prep time before the announcement post is live.

Once launched, partner's will be tagged and asked to reshare content from a stakeholder's owned channel (TikTok & Instagram, with the call to action directing to the website). In the last phases, two weeks of logistical event prep is set to prepare for the event day and a reminder partner post is shared a week before the event. Stakeholders have an additional week of prep before the event launch date slated at the end of the month. Each event has about a one (1) week grace period before planning and kickoff begins for the second immersive event.

Immersive Equity Timeline • <u>HERE</u>



Timeline Q1 Timing (June – August 2023)

Immersive Equity Timeline

TEAM	Collin Pullum				MC	DNT	I/W	EEK	/DA	Y				
					JUNE 2023 06/19/2023			3						
TASK TITLE	START DATE	END DATE	DURATION	PROGRESS	Μ	06/ T	19/2 W	023 Th	F	M	6/2 T	6/20 W	23 Th	E
Digital Presence Development						•			•	IVI				
Create @immersivepridehub Instagram Page	6/20/23	6/20/23	0	Planned										
Create @immersivepridehub TikTok Page	6/21/23	6/21/23	0	Planned						÷	00			
Immersive Pride Hub Website R1 Development	6/22/23	7/6/23	10	Planned						<u>.</u>				
Pride Hub Website R1 Review	7/10/23	7/10/23	0	Planned										
Pride Hub Website R2 Revisions	7/11/23	7/18/23	6	Planned										
Pride Hub Website R2 Final Review	7/19/23	7/19/23	0	Planned										
Pride Hub Final Revisions / Final Alignment	7/20/23	7/21/23	1	Planned										
Immersive Pride Hub Website Launch	7/24/23	7/24/23	0	Planned										
Media/LGBTQIA+ Partner List Development	7/24/23	7/28/23	4	Planned		<u>.</u>				<u>.</u>				
Media/LGBTQIA+ Partner List Outreach	7/31/23	8/3/23	3	Planned										
Template Graphic Kit Creative Development	, - , -													
@immersivepridehub Graphic Kit Creative Development KO	8/4/23	8/4/23	0	Planned	_									
Template Kit R1 Development (<i>Reels, Posts, Surveys, etc.</i>)	8/7/23	8/14/23	6	Planned							o			·
Template Kit R1 Review	8/15/23	8/15/23	0	Planned										
Template Kit R2 Development (<i>Reels, Posts, Surveys, etc.</i>)	8/16/23	8/18/23	3	Planned							·			
Template Graphic Kit R2 Final Review	8/21/23	8/21/23	0	Planned		<u> </u>				1				
Template Graphic Kit Deliverables Final Handoff	8/22/23	8/22/23	0	Planned							••			
LGBTQIA+ Immersive Ethics Guide Development	0/22/25	8/22/23	0	Flatifieu		<u> </u>								
-	7/2/22	7/10/22		Planned										
Prepartatory Research: Literature Review	7/3/23	7/10/23	5		_									
Prepartatory Research: Qualitative Research	7/11/23	7/24/23	10	Planned										
Preparatory Research: LGBTQIA+ Partner Outreach	7/14/23	7/21/23	6	Planned										
Develop Outline & Framework	7/21/23	7/28/23	7	Planned										
Guide Outline & Framework Review with LGBTQIA+ Partners	7/31/23	7/31/23	0	Planned										
Immersive Ethics Guide Content Development	8/1/23	8/7/23	6	Planned										
Immersive Ethics Guide R1 Review	8/8/23	8/8/23	0	Planned										
Immersive Ethics Guide Revisions	8/9/23	8/14/23	5	Planned										
Immersive Ethics Guide R2 Final Review	8/15/23	8/15/23	0	Planned	_									
LGBTQIA+ Ethics Guide Design Finalization / Alignment	8/16/23	8/18/23	2	Planned										
Guide Launch & Distribution (Pride Hub Web, IG, TT)	8/22/23	8/22/23	0	Planned										
Immersive Event #1 - UO x The Q Center														
UO x The Q Center Immersive Event Planning KO	8/23/23	8/23/23	0	Planned										
UO x Q Center Creative Development	8/24/23	8/28/23	5	Planned										
UO x Q Center Promo Deliverables Due	8/29/23	8/29/23	0	Planned						<u> </u>				
Immersive Event #1 Announcement Live	8/31/23	8/31/23	0	Planned										
The Q Center Partner Tag Reshare #1	8/31/23	8/31/23	0	Planned										
Immersive Event #1 Logistical Prep	9/1/23	9/15/23	14	Planned										
The Q Center Partner Tag Reshare #2 (Reminder Post)	9/18/23	9/18/23	0	Planned										
Immersive Event #1 Final Week Prep	9/18/23	9/25/23	7	Planned										
UO x The Q Center Immersive Event Day	9/26/23	9/26/23	0	Planned										
Immersive Event #2 - OMSI LGBTQIA+ Immersive Night														
OMSI LGBTQIA+ Immersive Night Event Planning KO	10/2/23	10/2/23	0	Planned										
OMSI Immersive Night Creative Development	10/3/23	10/9/23	6	Planned										
OMSI Immersive Night Deliverables Due	10/10/23	10/10/23	0	Planned										
Immersive Event #2 Announcement Live	10/12/23	10/12/23	0	Planned										
OMSI Partner Tag Reshare #1	10/12/23	10/12/23	0	Planned										
Immersive Event #2 Logistical Prep	10/13/23	10/27/23	14	Planned		<u>.</u>				<u>.</u>				
OMSI Partner Tag Reshare #1 (Reminder Post)	10/30/23	10/30/23	0	Planned							··			
Immersive Event #2 Final Week Prep	10/30/23	11/9/23	9	Planned		<u>.</u>				<u>.</u>				
OMSI LGBTQIA+ Immersive Night Event Day	11/10/23	11/10/23	0	Planned	_									





Timeline Q2 Timing (September – November 2023)

Immersive Equity Timeline

TEAM Collin Pullum				MONTH/WEEK/DAY														
						SEPTEMBE	R 2023				OCTOBER 2)23				NOV	'EMBER 2023	
TASK TITLE	START DATE	END DATE	DURATION	PROGRESS	09/04/2023	09/11/2023	09/18/2023	09/25/2023	10/02/2023	10/09/2023				10/30/2023	11/06/2023 M T W Th F	11/13/2023	11/20/2023	11/27/2023
Digital Presence Development					M T W Th F M					with								
Create @immersivepridehub Instagram Page	6/20/23	6/20/23	0	Planned														
Create @immersivepridehub TikTok Page	6/21/23	6/21/23	0	Planned														
mmersive Pride Hub Website R1 Development	6/22/23	7/6/23	10	Planned														
Pride Hub Website R1 Review	7/10/23	7/10/23	0	Planned														
Pride Hub Website R2 Revisions	7/11/23	7/18/23	6	Planned														
Pride Hub Website R2 Final Review	7/19/23	7/19/23	0	Planned														
Pride Hub Final Revisions / Final Alignment	7/20/23	7/21/23	1	Planned														
Immersive Pride Hub Website Launch	7/24/23	7/24/23	0	Planned														
Media/LGBTQIA+ Partner List Development	7/24/23	7/28/23	4	Planned														
Media/LGBTQIA+ Partner List Outreach	7/31/23	8/3/23	3	Planned														
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@immersivepridehub Graphic Kit Creative Development KO	8/4/23	8/4/23	0	Planned														
Template Kit R1 Development (<i>Reels, Posts, Surveys, etc.</i>)	8/7/23	8/14/23	6	Planned														
Template Kit R1 Review	8/15/23	8/15/23	0	Planned														
Template Kit R2 Development (<i>Reels, Posts, Surveys, etc.</i>)	8/16/23	8/13/23	3	Planned														
Template Graphic Kit R2 Final Review	8/21/23	8/21/23	0	Planned														
Template Graphic Kit Deliverables Final Handoff	8/22/23	8/22/23	0	Planned														
LGBTQIA+ Immersive Ethics Guide Development	0/22/25	0,22,25	0	Thanned														
Prepartatory Research: Literature Review	7/3/23	7/10/23	5	Planned														
Prepartatory Research: Qualitative Research	7/11/23	7/24/23	10	Planned														
reparatory Research: LGBTQIA+ Partner Outreach	7/11/23	7/24/23	10	Planned														
	7/21/23	7/28/23	7	Planned														
Develop Outline & Framework Guide Outline & Framework Review with LGBTQIA+ Partners			/	Planned														
	7/31/23	7/31/23 8/7/23	0	Planned														
mmersive Ethics Guide Content Development	8/1/23		0															
mmersive Ethics Guide R1 Review	8/8/23	8/8/23	0	Planned														
mmersive Ethics Guide Revisions	8/9/23	8/14/23	3	Planned														
mmersive Ethics Guide R2 Final Review	8/15/23	8/15/23	0	Planned														
LGBTQIA+ Ethics Guide Design Finalization / Alignment	8/16/23	8/18/23	2	Planned														
Guide Launch & Distribution (Pride Hub Web, IG, TT)	8/22/23	8/22/23	0	Planned														
Immersive Event #1 - UO x The Q Center																		
JO x The Q Center Immersive Event Planning KO	8/23/23	8/23/23	0	Planned														
UO x Q Center Creative Development	8/24/23	8/28/23	5	Planned														
JO x Q Center Promo Deliverables Due	8/29/23	8/29/23	0	Planned														
mmersive Event #1 Announcement Live	8/31/23	8/31/23	0	Planned														
The Q Center Partner Tag Reshare #1	8/31/23	8/31/23	0	Planned														
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he Q Center Partner Tag Reshare #2 (Reminder Post)	9/18/23	9/18/23	0	Planned														
mmersive Event #1 Final Week Prep	9/18/23	9/25/23	7	Planned														
IO x The Q Center Immersive Event Day	9/26/23	9/26/23	0	Planned														
mmersive Event #2 - OMSI LGBTQIA+ Immersive Night																		
MSI LGBTQIA+ Immersive Night Event Planning KO	10/2/23	10/2/23	0	Planned														
MSI Immersive Night Creative Development	10/3/23	10/9/23	6	Planned														
MSI Immersive Night Deliverables Due	10/10/23	10/10/23	0	Planned														
mmersive Event #2 Announcement Live	10/12/23	10/12/23	0	Planned														
DMSI Partner Tag Reshare #1	10/12/23	10/12/23	0	Planned														
mmersive Event #2 Logistical Prep	10/13/23	10/27/23	14	Planned														
OMSI Partner Tag Reshare #1 (Reminder Post)	10/30/23	10/30/23	0	Planned														
Immersive Event #2 Final Week Prep	10/30/23	11/9/23	9	Planned														
OMSI LGBTQIA+ Immersive Night Event Day	11/10/23	11/10/23	0	Planned														



Evaluation

Evaluation

GOAL 1:

To increase access and awareness of immersive technologies (i.e., virtual reality, augmented reality, mixed reality, etc.) to the Portland LGBTQIA+ community.

The metric used to evaluate success of Objective 2 (Action) for Goal 1 will be the development of two (2) collaborative immersive events with local LGBTQIA+ organizations in Portland, Oregon by the end of 2023. Crafting specialized immersive experiences that build community **OBJECTIVE 1 (AWARENESS):** Provide three (3) digital resources for LGBTQIA+ individuals in and support values of LGBTQIA+ individuals will be a critical factor to increasing positive Portland to learn & discover local immersive experiences by June 2023. sentiment with immersive media and provide audiences with interpersonal events that can The metric used to determine success of Objective 1 (Awareness) for Goal 1 will be the creation move them to participate and engage. Quantifiable success can be measured via attendance of three (3) established owned media channels (i.e., a website, an Instagram profile, and TikTok of these events, and distribution of a pre-survey upon entry to an event that can establish page) and resources for the LGBTQIA+ community in Portland that notes up-to-date and where users learned about the event, what motivated them to attend, and note their familiarity relevant information on targeted immersive experiences for this population. I propose with immersive technology.

collaboration with LGBTQIA+ focused entities, such as the Q Center or Prism Health, to join their resource network and increase audience reach via their website and social channels to promote these new resources. Additionally, we can measure user engagement (which in this context can be considered following, commenting, and sharing these pages with other users) to establish follower and engagement benchmarks. If these pages can be developed by end of June 2023, we can set follower goals to gain 180 followers by September 2023 (at a 6-8% monthly growth rate). This can be supported by consistent informational content and activity on pages.

- Strategy 1 Tactics: Develop an informative digital presence that centralizes information on immersive technology for a Portland LGBTQIA+ audience.
 - Create an Instagram page dedicated to Portland immersive experiences for LGBTQIA+ people
 - TikTok page for video & visual media
 - Informative website to house information for local LGBTQIA+ friendly immersive events
 - Partner tag with LGBTQIA+ friendly organizations in Portland to expand presence
 - Online newsletter
 - Template Graphic Kit (Digital distribution)



Develop two (2) in-person opportunities for Portland LGBTQIA+ OBJECTIVE 2 (ACTIC community members to participate in an immersive virtual experience by December 2023.

- Strategy 2 Tactics: Craft a local LGBTQIA+ immersive experience and/or event with local businesses/organizations that align with community need.
 - Partnering with two (2) organizations to develop an intentional immersive experience using virtual reality, augmented reality, or other avenues that align with LGBTQIA+ community values.
 - An event at the Oregon Museum of Science and Industry (OMSI) with the Teen Tech Center
 - Utilizing the Oregon Reality Lab at the White Stag Campus for an informative event
 - Q Center collaborative immersive experience
 - Portland Drag AR Performance with Snapchat











OBJECTIVE 3 (ACCEPTANCE): Positively increase sentiment of immersive media with LGBTQIA+ individuals by 20% by March 2024.

The metric used to evaluate Objective 3 (Acceptance) for Goal 1 will utilize the immersive media survey from this project and the baseline percentage of 42% of LGBTQIA+ respondents in Portland are somewhat excited about the development of immersive technologies, and aim to increase that sentiment by 20%, aiming for 62% excitement on the development of immersive technologies a year after the first survey was distributed.

This same survey should be shared with a control population of LGBTQIA+ individuals who live in Portland, OR to determine a more accurate percentage of positive sentiment towards immersive media in this population and provide that same survey in year to examine any changes in sentiment. While external factors and conversations on the development of immersive media can affect survey results, the Portlandspecific survey can inquire about the specialized immersive experiences held locally for LGBTQIA+ individuals and review if attending and participating in these events shifted sentiment to greater excitement surrounding VR, AR, XR, and 360° video applications.

- Strategy 3 Tactics: Develop content guidelines for LGBTQIA+ immersive experiences and a mechanism for evaluating user engagement & satisfaction.
 - Ensure authentic representation!
 - Consider intersectional identity and accessibility
 - Collaborative approach
 - Inclusive language and messaging
 - Sensitivity and respect
 - Handle data and privacy with immense care
 - Hold space to learn and develop with community
 - Ensure mechanisms to evaluate and assess

GOAL 2: To provide a strategic framework for building an immersive experience that ethically considers LGBTQIA+ individuals at the forefront.

Increase overall representation of the LGBTQIA+ community in immersive experiences by ensuring at least 50% of the narrative, characters, and content includes LGBTQIA+ identities and lived experiences.

The metric used to evaluate the success of Objective 1 (Awareness) for Goal 2 will be ensuring that the developed immersive experiences successfully include LGBTQIA+ focused characters, values, resources, and other content in at least of half of the immersive experiences. Ensuring collaboration with LGBTQIA+ individuals to share their narratives, acknowledging queer history, or sharing informative resources for this population will help ensure this metric is achieved.

OBJECTIVE 2 (ACTION): Collaborate with two (2) LGBTQIA+ organizations or businesses in Portland to partner with and build an immersive experience that centers around the community's values and needs.

When developing these specialized immersive experiences, the metric used to measure success for Objective 2 (Action) for Goal 2 will be confirming partnership with two (2) LGBTQIA+ organizations whose mission is to serve the community. Partnering with previously noted organizations (i.e., The Q Center, Prism Health, University of Oregon, etc.) will ensure this metric is met.

- - Utilizing the Oregon Reality Lab at the White Stag Campus for an informative event
 - Q Center collaborative immersive experience
 - Portland Drag AR Performance with Snapchat



• Strategy 2 Tactics: Craft a local LGBTQIA+ immersive experience and/or event with local businesses/organizations that align with community need. • Partnering with two (2) organizations to develop an intentional immersive experience using virtual reality, augmented reality, or other avenues that align with LGBTQIA+ community values.

- An event at the Oregon Museum of Science and Industry (OMSI) with the Teen Tech Center
- Utilizing the Oregon Reality Lab at the White Stag Campus for an informative event
- Q Center collaborative immersive experience
- Portland Drag AR Performance with Snapchat

 Strategy 2 Tactics: Craft a local LGBTQIA+ immersive experience and/or event with local businesses/organizations that align with community need. • Partnering with two (2) organizations to develop an intentional immersive experience using virtual reality, augmented reality, or other avenues that align with LGBTQIA+ community values.

• An event at the Oregon Museum of Science and Industry (OMSI) with the Teen Tech Center









Evaluation (cont.)

GOAL 2:

To provide a strategic framework for building an immersive experience that ethically considers LGBTQIA+ individuals at the forefront.

OBJECTIVE 3 (ACCEPTANCE): Implement a measurable user engagement survey to note community satisfaction with immersive experiences, aiming to increase participation amongst 30% in the LGBTQIA+ community in Portland by the end of 2023.

The metric to ensure success with Objective 3 (Acceptance) for Goal 2 is providing a quantitative survey after participation at LGBTQIA+ immersive events to aggregate user attendance and satisfaction with their experience. Capturing survey information can be beneficial in revealing insights to how local members discovered the event and what motivated them to participate, as well as note attendance at events. By holding at least two (2) LGBTQIA+ focused immersive events and distributing surveys at other LGBTQIA+ friendly or open immersive events, we can capture participation attendance from June 2023 to December 2023 in a six-month period to review an initial participation percentage and compare to the end of the year if a 30% increase was met.

- Strategy 3 Tactics: Develop content guidelines for LGBTQIA+ immersive experiences and a mechanism for evaluating user engagement & satisfaction.
 - Ensure authentic representation!
 - Consider intersectional identity and accessibility
 - Collaborative approach
 - Inclusive language and messaging
 - Sensitivity and respect
 - Handle data and privacy with immense care
 - Hold space to learn and develop with community
 - Ensure mechanisms to evaluate and assess



Conclusion

After dedicated review, I can surmise that Portland LGBTQIA+ community does desire engagement in immersive experiences. However, the knowledge that discriminatory bias, stereotypes, and other factors have potential to be built into the software of this technology has created a healthy skepticism that encourages users to not engage in immersive experiences, despite proposed benefits. Insights from qualitative interviews suggest that community members are aware of the potential for this technology to alleviate or even address some of the challenges that the LGBTQIA+ community is facing, there is still opportunity for harassment and violence to target and discriminate against this community in virtual spaces, just as they do in the physical and digital worlds.

For these technologies to be given the opportunity to enrich the lives of society, it is crucial that developers adopt ethical practices that reduces bias and harm to marginalized populations, much like the LGBTQIA+ community who have historically faced radical discrimination on the basis of gender and sexual identity, even to this day. This research shows that queer individuals are interested in engaging with VR, AR, and other immersive experiences to remotely build community, discover services that benefit them, and encounter immersive stories that accurately represent and celebrate the vast narratives that LGBTQIA+ people live and have lived. University of Oregon

That is why the foundation of this work is to increase the awareness of the benefit of participating in immersive experiences to the Portland LGBTQIA+ community to simultaneously promote equitable access to this technology so that more individuals from various walks of life and collaborate in the creation of new content for this medium.

By utilizing strategies to craft LGBTQIA+ focused immersive events, collaborating with Portland community organizations, and leveraging the services and rapport that the region already has with LGBTQIA+ members, a growing interest of this technology with the community can provide a new generation with insight and potential to help craft even bolder immersive narratives for the public to experience. The hope is that the foundation of work with this group could extend to the experiences of other marginalized populations that acknowledges the intersectional relationship between gender, race, sexual orientation, neurodivergence, class, and other socioeconomic factors that accompanies human existence and understanding. The richness and depth of queer history is just as deserving to be embodied in an immersive environment as any other narrative, and with more research in this field, immersive media can become an invaluable tool that uses the virtual realm to help enrich the human experience.





Thank You



School of Journalism and Communication



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Appendix

APPENDICES

Qualitative Interviews — Consent Statement & Questions

Thank you so much for your participation in this interview. Please know that this session will be recorded. The intention of this interview is to understand need or desire for immersive technology in the Portland LGBTQ+ community. There are 13 questions, you are welcome to share as much or as little information as you like. You do not have to answer any questions that make you uncomfortable, and you can rescind participation at any time. Please know there is no consequence for not participating. There will be time for debrief afterward if you would like to add commentary or ask any questions.

Demographic/Identity Questions

- Where would you describe your hometown?
- How long have you lived in Portland and what brought you here?
- How would you define your gender identity/expression?
- Are there any specific communities that you feel a part of in Portland?

Community Involvement Questions

- In your own words, how would you describe Portland's LGBTQIA+ Community?
- Could you describe your involvement in the community? (i.e., participate in events, volunteer, activism, performances, etc.?)
- Can you recall a memorable story of a time you felt attached to the LGBTQIA+ community?
- In your experience, what challenges do you think LGBTQIA+ individuals are facing in the Portland community?
- Are there any resources or needs that the LGBTQIA+ community are lacking access in that are more accessible to other populations? Why or why not?

Immersive Media Questions

- How familiar are you with immersive technologies? (i.e., virtual reality, augmented reality, mixed reality, etc.)
- Have you used any mediums of immersive media before? How would you describe that experience?
- Do you feel that immersive media could help alleviate some of the challenges the LGBTQIA+ community is facing? Why or why not?
- Can you think of any immersive experiences you would like to see accessible for the LGBTQIA+ community?

Misc. Questions/Debrief

• Is there anything else about this experience that you would like to share?

Katya Transcript

Katya Interview

Thu, Apr 20, 2023 2:06PM • 23:33

SUMMARY KEYWORDS

people, community, portland, queer, access, absolutely, questions, technology, pride, honestly, person, fact, real, experience, life, living, growing, big, space, event

SPEAKERS

Collin Pullum, Katya

Collin Pullum 00:03

Alrighty, well thank you so much Katya for your participation in this interview. Please know that this session will be recorded, and the intention of this interview is to understand need or desire for immersive technology and the Portland LGBTQIA+ community. There are 13 questions and you're welcome to share as much or as little information as you like. You do not have to answer any questions that make you uncomfortable and you can rescind your participation at any time. And please know that there is no consequence for not participating. There also be time for a debrief afterward. If you would like to add commentary or ask any questions.

Katya 00:45 Absolutely, I'm obsessed.

Collin Pullum 00:47

Awesome. So just to start off as kind of getting to know you a bit for the project. Where would you describe your hometown?

Katya 00:57

Well I guess I would describe it as Portland but I'm originally from Minnesota.

Collin Pullum 01:00

Okay, awesome. And how long have you lived in Portland? And from moving to Minnesota. What brought you out here?

Katya 01:10

I lived here almost eight years I kind of moved out here officially in 2016. I was here for like four months. And then I traveled around a lot like I went to like 30 different states and just really found great community here. I... obviously we're going to some interesting growing pains right now. But the ethos of Portland really matches what I personally believe and I have found like, myself here, I've seen so many people come into themselves here. And while we have things that we're working on, I think that is to me kind of what is the biggest draw to here. I was like, also dating someone at the time who worked at Intel.

Collin Pullum 01:52

And then how would you define your gender identity or expression?

Katya 01:57

I'm technically two-spirit. I do just generally say non-binary. Also because I think I have an interesting experience of being raised by white folks and not you know, I was adopted, so I didn't technically get a lot of information about my background till I was like 28 and a lot more, because I think non-binary sort of implies the existence of a binary that you're like not on, where I kind of don't feel, I don't know, I feel very comfortable expressing myself in like, all sorts of ways. And so that's kind of where I'm at now.

Collin Pullum 02:33

Amazing. And I know you talked a bit about finding specifically community and really aligning with the ethos of Portland. So, are there any specific communities within Portland that you feel a part of?

Katya 02:48

I mean, I work predominantly with the nightlife community. I think though, I guess I shouldn't say predominantly. I originally predominately worked with the nightlife community. I think I was able to... I always joke it's the wild wild west of culture. You know, people go in the same room, see people who don't look like them. They're drunk (joined laughter). And you know, most of the time people are just looking to have a good time, which is honestly a great place to start when you're trying to like build a community and get people to see people... interact with aren't, you know, not necessarily, not just people who look like them, but also people they don't want to hook up with or aren't interested in having people hook up with them. And like breaking that bond, or breaking that barrier, excuse me, and then that kind of torpedoed, or not torpedoed what's the word... avalanched! Snowball into working in like nonprofit communities. I tried to do a decent amount or like always kind of have like, the fun and the serious work going hand in hand. I work in the fitness community and work in local government. I... now I think there is— I mean the LGBTQ+ in general.

Collin Pullum 03:58

Absolutely. All the things definitely (joined laughter). And in your own words, how would you describe the Portland LGBTQIA plus community if there's even a way to describe it?

Katya 04:14

Absolutely. strong, diverse, tight knit. And I would say growing in many ways. Growing in size, population, and also just individuals doing a lot of growing up here. Portland is a very transient town, and not just because of the trans access here. But people often move here because of the access to resources. Or even like myself, I really was trying to make a switch, like out of, you know, a conservative place or out of a more Midwestern place and this is the cheapest city to live in on the west coast. So, we get a lot of folks that kind of like this is their entry point into queer culture. This is their entry point into West Coast living and I think, I don't know. It lends itself to having a lot of different folks be part of something relatively quickly, I think if you went to SF or if you went to LA it will take you a long time to establish or a long time to kind of find community. But here I honestly... Relatively quickly was like taken in by like a bunch of people. And I try to like, take that policy in to. I don't... I'm not looking for reasons not to like someone. I'm not looking for reasons not to trust people. I'm excited when I get to meet someone new, and if they end up being the worst then we just don't hang out with them anymore. But I kind of like that I can kind of like, I don't know, innocence. Gay, queer until proven otherwise.

Collin Pullum 05:36

(Laugher) Absolutely. I definitely share that experience, now being here almost two years. And you already went in great detail a bit about your involvement in the community, so I'll move on

from this question. But can you recall or tell just a very memorable story of a time that you really felt attached to the community? Maybe an event or a moment that you're really fond of?

Katya 06:04

For sure, I would say Pride 2018 was my first event. And at that time, the community... I— It was kind of like unbeknownst to me because I was... I was living here but I was not in the scene. I would go out, but I didn't know whose event was who. I started working at Holocene and kind of having more awareness of how nightlife works. And there was an opportunity that arose to you know, my boss was like, "Hey, you would say you wanted to do events, you know, typically is something that you kind of have to like work your way up to." But I kind of got to throw like a 300–400-person event, it was called EXTRA with Farrah Moan and Rify Royalty, and you know, that was, it was incredible. I mean, of course this is your first time, so you really remember that. And I probably would say like another time it's like last summer for Pride, for Dollapalooza. So just being able to consistently try to get people to be in a safe space is difficult. But Pride is really that one time of the year that you can, you know, make people do it and flashy. It really is fun and you to see people come out of the woodworks and maybe how have taken sabbaticals or you know, of course all that fun visiting crowd too. So, Pride is generally my favorite time of the year.

Collin Pullum 07:17

Absolutely. Funny enough, fun fact Dollapalooza was my first Pride event ever that I was able to go. Just because I would always be working or things would always be happening in like previous year, so that was like first out and proud Pride. [It] was amazing. That's wonderful. Pivoting a little bit, in your experience, could you name some challenges that you think that LGBTQIA+ individuals are facing, specifically in the Portland community?

Katya 07:51

I think there's a zillion things. I think—I think we can like do something really quickly about slash would have the most impact, I was thinking about access. Just to get people to be in the same rooms or funds or whatever access looks like that's been our, I mean, it's really new that it's like cool and hip to have a gay person there. It's even newer and hip to have a queer person there and a trans person there. So that is a relatively new barrier that we're breaking down and we're like kind of consistently chipping away at that but I'm really striving to try to get people to see themselves in these spaces in places that maybe they wouldn't have... Because of the way we were conditioned as kids to sort of never imagine ourselves as governor and never imagined ourselves as a doctor or lawyer because that we'd have to change who we are or not be seen or taken seriously. And so I think access to spaces, funds, places even. Like I mean honestly, the gentrification of everything is unpleasant in many regards, because it's sort of like capitalism has had taken it. But I do like the idea of people who typically aren't like economically, super advanced, they're still able to sort of like get in, we can get them in places and spaces, even just physically being close to the epicenter of things is... is important too. That's kind of part of access. You have to take a 45 minute... or \$45 Uber excuse me, to somewhere. 45 minute bus ride to somewhere. So access, I want to say my maybe a little bit more access. I think there is, in the same breath... I mean, I'm not a huge, like woke person. I don't know that— I feel like now it has this huge negative connotation. I don't think it's a negative thing. I don't think being conscientious about other people is a negative thing. I do think the woke wars in which Portland often finds itself enthralled with or you know, battling within like liberal versus like progressive is like the wildest thing to me. I'm like you all have no idea how the world operates. Most places, you go... You would not have someone asking you to pronouns or, you know, I'll go to a bar somewhere in like Phoenix and someone will just grab me. There's not this like, there's not this huge consent dialog. There's so many things that we take for granted here and you know,

because we've been a progressive or labeled as a progressive place for so long, that people come here and kind of get to perform wokeness to each other, especially white folks. So, I think that is honestly I mean, I just tried to get people to like, take life seriously, but don't take yours or take yourself seriously but don't take life so seriously, or one form or the other. Like just breathe, and try to see each other as allies because, again, I think the fact that we're even considering each other as humans is like, you know, there's a big portion of the population that don't see us like that. So I don't know whether that—a succinct way. Maybe a struggle is like a... I would say there's like a police— there's like a... It almost goes all the way back around like we're anti-policing and we're anti... these punitive measures and then— but we're doing it to each other often about things like you know, I think there's like a there's like some cognitive dissonance that needs to be fixed. And probably that goes for like a lot of other places too, but it's extra... [unidentifiable]

Collin Pullum 11:13

Definitely. And you... I mean, honestly, this was a perfect segue into my next question, and you touched on a lot of this already because it speaks exactly to that access, of just like any specific resources or needs that the community is lacking access that is more accessible to other populations. But I mean, you really went in great detail already there.

Katya 11:39

Yeah, I mean it's like the biggest thing is money. It just is. I'm realizing... There was there was like a really famous, like, convening of economic leadership and academic philosophers and he's like, we're talking about all these different things and it's like, yes, but also money. If these people had more access to money and again, I do think that is like kind of seeing yourself... A lot of people imagine themselves as poor artists, or they imagine that that's like the struggle or like if I'm queer, I'm probably going to be poor and kind of like rewriting that narrative. I love like, I don't know, Sasha Colby when she talked about like owning land and like being the matriarch of her family as like a trans woman in the 80s and 90s. Like, that is crazy. But that's also the direction we need to go. Capitalism is not the end all, but it's better than you know, having you know serfs and [unidentifiable] so like it's part of the progression. And so like in this system right now, just you know, get some money. Don't be afraid of money. Find— there's tons of money out there like grants like... There's so many other things like it's kind like my job has been jumped out of the city, but I'm switching. I don't know maybe get like less permission for access and more I don't know, going for it yourself.

Collin Pullum 12:56

I really like that. Yeah, that's amazing! Now pivoting even more so kind of transitioning into conversations around immersive technologies. This is kind of first just getting a gauge of how familiar you are with immersive technology. When I... And when I use that term, I mean specifically with like virtual reality or augmented reality, mixed reality, all those different realities. So yeah, feel free to chat just through like, how familiar or have you used these before and things like that.

Katya 13:28

I'm not a gamer, which I think is like the primary use of these things right now. I'm a— but I'm a big tech ethicist. It's actually since *The Social Dilemma*. I don't know if you watched that when that came out, but I really did like... I just like hard stopped all social media, because honestly, I would almost argue that... that it's probably not officially part of it, but it is a virtual reality for which we have a major real-life consequences for and impact. So that really made me like, I'm not big on this AI thing. Like I'm just I'm very, you know, I'm also from the Midwest and I grew up in a town of 3,000. And I didn't have real internet until I was like 18 but I'm... Generally, I don't

want to say distrustful. But I'm just like, this is a technological adolescence that we're moving really quickly because it's exponential. Like we learn more things each day than we knew the thousands of years prior. And so, things like immersive virtual technology. Also, sometimes that I think about like... I don't know if this is part of it, too, but like the fact that people can own property or like own pieces of art within this space that like now has value. I think it's like just a really, we don't even have— we're— we don't... we haven't even officially housed and fed everyone in this reality. And now we're in real estate in— within... with another reality for people that have more... I don't know. I don't know or fully understand that. But it's like, the fact that that's an asset to me. I mean I love that Azealia Banks sold her sex tape for a... million dollars or whatever. Bitcoin, what's the— It's not Bitcoin... What's the...?

Collin Pullum 15:11

I think? Are you speaking of like NFT's, in particular?

Katya 15:15

There you go. Yeah, I don't know again. I'm probably proud brow bushing a lot of just, like, alternate reality and stuff. But to me, it kind of does all go under this umbrella of not tangible. So, I guess that's my... I'm aware but not a participator because I probably would [unidentifiable].

Collin Pullum 15:32

Absolutely. And just out of curiosity, have you used this before, just like any experience or had a friend? As far as like maybe like a, like a virtual headset? Or...

Katya 15:47

I mean, I have... I have done it. I have so many nerdy friends that they have and love it. It's just... also I think as an autistic person and sensory wise it like almost makes me nauseous. Like it really like... fucks up my whole balance and whatever I've got going on.

Collin Pullum 16:03

And... for all kinds of people to, truthfully. Yeah, we could have a whole deep hole conversation about it. But yeah, that's very, very great points. So, going off of that, do you feel there are elements to immersive media that could help alleviate some of those challenges? I know we're specifically talking about access.

Katya 16:25

Don't be I mean, I'm a big person. Like I'm not afraid of progress and, like I don't like the ideaagain, it's like I'm from the midwest and I didn't grow up— but it doesn't mean I'm shouldn't use these things just because.

Collin Pullum 16:35

Yeah, absolutely.

Katya 16:37

I think that— I do think about the implications like you could live life as a black person or you could see what living life as a queer person is like in this, you know, reality, but I think that the big thing is that a lot of these technologies are being created by like, middle aged white men in Silicon Valley. And are there like, really, they're all about progress, progress, progress, growth, growth, growth. So, you know, they're just now introducing like, oh, wow, the way you design this program is racist or the way you design this program is misogynist or what— or like, just the way, innate way of just having one group of people do something is troublesome and worrisome

to me. But I think there are possibilities if they're the right people in the room, creating these technologies or having input in them and yeah.

Collin Pullum 17:25

Absolutely. And this is actually my last question, kind of building off on that as well. But are there any immersive experiences that you can think of or that you would like to see accessible for the queer community?

Katya 17:44

I mean, I think the biggest thing that we learned in 2020 Is that not everyone gets to go into public spaces, right? Whether it's because of your you know, your chronic illness or crazy social anxiety or you have someone in your life that has chronic illness and is susceptible to COVID or honestly, I think there is— I mean, I still see people still wear masks, I mean, if you work in the medical field, or like I mean, I get it, I don't necessarily know if it's, it's maybe a bit more of a placebo at this point, but— but I do really, I'm at... the point being is I do know that there's still a huge portion of the population that does not feel comfortable in big public setting so that can be kind of cool. You know, it's tough because of like, what do you call it licensing things like it can be really hard like I really wanted to Dollapalooza broadcasted but like, because so much of the music was, you know, copyrighted it would—it would have been shut down right away. Accounts would have been shut down, all that sort of stuff. So, it'd be cool to have like something where you could just in your own home, and you could be there with your friends in the same space. I think, to me, I'm all about technology leading to real life implications and real-life experiences. [Momentary pause] I'm so sorry for screwing up your recording!

Collin Pullum 19:21

[Chuckle] That's totally fine. I paused it so it is all good.

Katya 19:23

I think other ways too that it can be used... Um, I mean, again, it could be really cool. I like the idea of like some cis white guy just being able to like, but that also seems kind of problematic. Just be able to scroll through different experiences. But you know, if done properly with right intentions, it can be really fun, really amazing. Or even like in an HR setting, like you can just switch places and really, you know, maybe you can like data enter your exact responses or whatever, and people be able to experience that.

Collin Pullum 19:53

I think that's all, I mean, very critical insight. And just as a debrief like this is kind of exactly the type of conversations that I hope are happening and— and just for your awareness at least a lot of what we have currently talked about in our program. I just was in an ethics course with one of my very close professors, Donna Davis, and this is a lot of the conversations that are happening that you know, a lot of these technologies are moving full speed ahead, and we're not considering the implications on what it's doing for marginalized people.

Katya 20:25

The fact— I remember when, I remember when— because back to The Social Dilemma, there's a real— I bet you would love it— It's called Your Undivided Attention. It's a really great tech ethics podcast because they don't just talk about the issues they do, like I would say like, it's like 40% the issues and 60% like here, this is- ways that we don't have to bury the bottom. Here are the ways that we can, like still have growth, but it doesn't have to be crazy. And I remember when they were just talking about the fact that you could like, have some sort of like writing device that would like write in your voice and write in your tone and like use your exact

vocabulary. And I was like that kind of seems really scary because I don't want anything to get out that's like... not me. Literally, I'm— the person who is the former CFO of the Nike for— or not CFO, the Chief Officer of Diversity, Equity, and Inclusion at Nike is suggesting that people use it as a tool to create statements of apology or like to navigate situations. I'm like, that's like completely past the point. But at the same time, if that technology exists, why reinvent the wheel? So, it's like, I can't like tell people not to use it. I'm like, ethically, it seems questionable, but I guess, efficiency wise, and like, we literally typed in like a random scenario where like, you offended the Latin community. These are the things you're going to do. And I would say it created like, in my personal opinion, a pretty good apology. But that to me means like, okay, well, this company didn't do anything actually like...

Collin Pullum 21:57

Right. Or where is the action behind that? Yeah, 100%.

Katya 22:00

Like if you're using it to make cover letters or like you're using it to do busy work like, absolutely! But like the idea of like, putting sincere or important tasks... Speaking, whatever through this like thing but also who— I mean, who knows who owns it? I don't know. It just— it just seems like a rabbit hole from which we are not fully prepared, ready to go. We barely can do literally... the we— there are so many internet fallacies that move so quickly, just digitally picture-wide. Okay, know what... Pictures, deep fakes. Let's take that out to the world.

Collin Pullum 22:40

It's very true. Amazing. Well, that was all of my questions. I wanted to give you the opportunity if you had anything else that you wanted to add to the experience, anything you'd like to contribute. But overall, thank you so much. This definitely gives me amazing insights just to were to continue this work and that perspective, from someone outside of myself. I think is the real importance and relevance here.

Katya 23:08

I think, I don't know if it kind of replaces some of your questions on like, how this could work for the community, but like, this is another field for which people could be getting involved in. I'm excited that you're doing this work.

Collin Pullum 23:21

Appreciate it. Well, thank you so-so much, I will stop this recording. Thank you so much.

Miguel Transcript

Miguel Interview

Fri, Apr 21, 2023 3:11PM • 26:51

SUMMARY KEYWORDS

Igbtq, people, immersive, portland, feel, technology, headset, kinds, question, community, Igbtq community, happening, bit, pandemic, conversations, life, pivoting, healthcare, industry, events

SPEAKERS

Miguel Cobian, Collin Pullum

Collin Pullum 00:01

Awesome. Well thanks, Miguel so much for your participation in this interview. Please know that this session will be recorded. The intention of this interview is to understand need or desire for immersive technology in the Portland LGBTQIA plus community. There are 13 questions and you're welcome to share as much or as little information as you like. You do not have to answer any questions that make you uncomfortable and you can resend participation at any time. And please know that there is no consequence for not participating. There will be time for a debrief afterward if you would like to add commentary or ask any questions. Awesome. So, first question, where would you describe your hometown?

Miguel Cobian 00:43 Salem, Oregon.

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Collin Pullum 00:44

Salem, Oregon. Awesome! And how long have you lived in Portland and what brought you here?

Miguel Cobian 00:51

I've been in Portland for 12 years now. My job brought me here. I was growing up in Salem and commuting to work here and then I crashed my car and had to move to Downtown Portland to work.

Collin Pullum 01:06 Oh my god, oh my goodness!

Miguel Cobian 01:07 So that's that's quite a journey there.

Collin Pullum 01:10

And then just a bit about yourself, how would you define your gender identity or expression?

Miguel Cobian 01:15

I am a cisgender male as far as gender identity goes.

Collin Pullum 01:20

And then are there any specific communities that you feel a part of in Portland?

Miguel Cobian 01:26

Definitely the LGBTQ community. In Portland, not so much the Hispanic community but when I go back home and you know, that's sort of like two—two... sort of two different lives you know, when you go back home and you live like your Hispanic life, and then you come back, it's gay life [chuckles].

Collin Pullum 01:47

And then pivoting a little bit to more community involvement. I know you mentioned that you feel part of the LGBTQ community here. So, in your own words, how would you describe that community in Portland?

Miguel Cobian 02:03

How would I describe... It's very diverse. In the last couple of years, we have noticed a heightened sort of queerness and sort of acceptance and sort of more of a like... It's like flourishing. It's like a flower that's blooming, like, individuals that I've known for many, many, many years that you would just look at and be like, okay, he's just your average, gay male. All of a sudden, you feel empowered to you know, like, dress differently and just like they people are living like their true authentic selves. But we also feel a little bit under attack, right? From all from... Luckily not here in our home state, but we just know that, you know, throughout the country and throughout the world that you know, that we are, we're a target. That's so-so I think people do realize that and they live with that sort of like knowledge that, you know, we're under attack right now.

Collin Pullum 03:05

Definitely. And could you describe a bit of your involvement currently within the community, whether that's, like different events you participate in volunteering, activism...

Miguel Cobian 03:17

Yeah, I've sort of slowed my role with the activism stuff. For over six years, I was on the board of the human, the national board of the Human Rights Campaign. So that was political activism, obviously LGBTQ equality, mainly legislative equality. So did that, you know hosted events, fundraisers. Before the pandemic, I would host a monthly mixer called Fresh Thursdays and it was every first Thursday at Blue Hour in the Pearl. And I did it that every first Thursday for... four to five years, I think, and the last one was March 2021 when the pandemic shut down... That restaurant unfortunately is no longer there. And people have sort of like, asked me to bring back something that's like a mixer and people can go and like... Sort of see things. But I feel like it's time for me to like step away and like let other people like younger people, drag queens, people that are like gender fluid and more queer than myself sort of like... I can see that they're popping up events all over the place, especially now as we open up and go back to "normal". What... I feel like I'm rambling [laugher]. How do I see myself engaging... So-so I did a lot of the political stuff. I worked on Governor Kotek's campaign. Obviously, she's the Governor now so we won., that was great. And yeah, I feel like now I'm just really focused on my career that which has taken me out outside of the LGBTQ landscape. You know, fundraising for the museum and things like that. And then when I'm not doing that, I'm just, it's friend time. So, friend and relationships.

Collin Pullum 05:04

That's awesome. And then you kind of touched on this with a lot of your involvement, but just curious if you can recall, some kind of memorable story of when you felt really attached to the

community? Maybe an event that you went to or something that you did, that you just felt really attached and grounded to it.

Miguel Cobian 05:23

It would have been, and I have a photo of this, it would have been at last year's Pride. This photo right here, and you can pinch to zoom if you'd like. And actually, I think there's— It's scrollable that was like just pride recap and last June you know, coming back to in-person events and things like that. We I just felt really, really connected. It was an election cycle. You really saw the energy of LGBTQ individuals and straight allies just sort of like supporting you.

Collin Pullum 06:00

That's awesome.

Miguel Cobian 06:01

Got a little choked up there... Just like seeing like the support that we have here and— and really like a very but— a very unique bubble, you know, which is Portland, which is Oregon that unfortunately not everyone can feel like that throughout the country, so.

Collin Pullum 06:17

Absolutely. And like— fun fact, last year... cause I partic— that was the first time I was participating in Pride events ever. Like every time there was a Pride anywhere I lived. It's not that I didn't want to go or didn't feel like safe to go it was more just like I was just always working or there was some life obligations that was always happening. And so, I remember Dollapalooza in particular...

Miguel Cobian 06:43

Yes, I was there!

Collin Pullum 06:44

[Pause] That was— that was like my first "I'm going to go to event, I'm going to do something and meet people." So that was a really, really awesome time. So yeah.

Miguel Cobian 06:56

That's cool. Yeah, Dollapalooza I was there. I know we saw each other there [laugher].

Collin Pullum 06:57

That's amazing. Yes [laugher]. And then pivoting a little bit... In your experience, what types of challenges do you think the LGBTQ plus community is facing, specifically, even in Portland? Just because I know there's— you can be all over, but if were to keep it to Portland what kind of challenges do you think they're facing?

Miguel Cobian 07:19

Hmm, well depends what letter of that, you know, acronym you focus on.

Collin Pullum 07:24 Very true.

Miguel Cobian 07:25

The transgender community is obviously under attack again right now. Accessibility, and sort of like equity I think is a challenge right now for the LGBTQ community. I have friends from all walks of life and it's interesting to me to see and identify the certain groups of individuals that

are struggling. It could be mental health, it could be financial, it could be, you know, relationships. We sort of have this joke in Portland that everyone's got an open relationship. And so, they're either in a relationship or not, or who knows, or they don't want to label... You know, like, I feel like we're in a relationship crisis right now because people either are like, not interested in like, committing to anything, or they're in a committed relationship but you know, they're just like,—they're just, you know, living their gay life I can say, so, I feel like there's a couple of challenges. I feel like a lot of people do feel a little alone sometimes. Even though you could be surrounded by friends, you know, you can still go home and feel, feel alone sometimes. So that's what just came out of nowhere, I'm surprised that I identified that right now.

Collin Pullum 08:50

And then are there any... Kind of going off of that, do you think there's any resources or needs that the community is lacking in or lacking access to that may be more accessible to other less marginalized populations? And if not, why not? If so, why?

Miguel Cobian 09:11

Resources... wait can you start the question again?

Collin Pullum 09:15

Yeah! Are there any resources or needs that the LGBTQ plus community are lacking access in that are more accessible to other populations,

Miguel Cobian 09:25

Lacking access in for the LGBTQ community? Not... well. That's a good question. I mean, we have health care access, we have you know, like, thankfully for like Cap and things like that... We have free health care through Prism and you know, other—other you know, the Oregon Health Plan. I know that some people don't know how to access those things. Obviously now we have the World Wide Web in our pockets, and it's just a Google search, but... And we have things like the Q Center which is an LGBTQ Resource Center, but you know, that's up there and in Northeast and people probably don't even know it exists... Some people. But I guess more like career, career-focused... LGBTQ career-focused resources. I think, I haven't seen. I think it would be good. I have a lot of younger friends that you know, they're like, "I don't know what to do with my life" or "I don't know like wherever I'm going" and even people that are sort of like starting their career and you know have already like had their foot in the door until like these great companies sometimes don't really know like they can... You know, they are a little more than shy side of the spectrum, whereas like, heterosexual individuals might also be a bit more aggressive and things like that. So, I think like, career advice and career coaching and also like financial advice and things like that, I think would be good. Do they have to be LGBTQ branded? Does have to have a rainbow logo on it? Probably not. I'm not a type of person that will look for a service and try to find an LGBTQ one. If there happens to be an LGBTQ resources then I'm grateful to like, I'm happy to support them. But I don't necessarily go that that path. I know like back in the day, there used to be like the gay Yellow Pages, and things like that, or just LGBTQ owned businesses, but I don't think we have that anymore. So, it'd be good to have a resource like that.

Collin Pullum 11:38

Very interesting. And now, pivoting a bit more to that immersive side that I know I prefaced with. Just personally, how familiar are you with immersive technologies, whether that be virtual reality, AR?

Miguel Cobian 11:54

I would say I'm as familiar as the average... Well, I would say I'm a little bit more familiar than the average consumer. I mean, I work for a Science and Technology Museum with my almost five-year stint at Apple and things like that. I sort of still follow those—those trends. I was actually talking to a friend about... You know, this rumored Apple headset that's coming out and I was saying until we find a real use for the consumer, right? Augmented reality or virtual reality, I think there's a lot of potential for it, but we still don't know like, is it— is it a business tool? Is it a gaming tool? Is it—again, consumer? Is it an educational [tool]? So, I think I think we're at the beginning of that stuff.

Collin Pullum 12:41

Totally. And have you personally used any mediums of immersive media technology?

Miguel Cobian 12:49

No, just my phone, you know, with the camera and all that kind of stuff and the LIDAR sensors and things like that. You can... That's the extent of it. I have never put on— And we have one right next door at the Teen Tech Center. You know, the Oculus, I have never put a headset on my life [chuckles].

Collin Pullum 13:05

So, based on this kind of knowledge and webbing that you know from different networks, do you feel that immersive media might be able to help alleviate some of the challenges that you talked about earlier that the LGBTQ plus community is facing?

Miguel Cobian 13:22

I do not know.

Collin Pullum 13:24

Yeah! That's fair. And then maybe kind of flipping on a different point. Do you think there's any immersive experiences that you would like to see more accessible? I know you talked about kind of, like, career... Like finding more career-focused stuff for I mean, just in general, but for the LGBTQ plus community. So, would there be like a VR experience that you would see be useful for the community or something even as accessible as having your phone? Granted, not everyone has access to a phone but...

Miguel Cobian 14:01

Wow. Um, gosh, I don't know. I mean, I can see the immersive technology be useful again, in an educational setting. An educational platform. I—I don't know because we haven't seen the potential. 10 years ago, I didn't know that you would have a map in your pocket you know, with you all the time. So, I mean, I feel comfortable saying I don't know but I think that there's potential for educational opportunities, and maybe even healthcare, but I don't, I'm not so sure...

Collin Pullum 14:48

Totally, there's no right or wrong answer. It's purely, your thoughts.

Miguel Cobian 14:52

You know, it's like we have this potential there, but we still have, I have not seen. I mean, it could be good for therapy, right? For anxiety, for all these things. So, it's things that like the LGBTQ community obviously has a heightened level of... Anxieties, and, you know, emotional things. And so, I think that would be a good— a good thing to tap into when creating those things.

Collin Pullum 15:19

And that was my last question. So, I did want to open the floor. If there's anything else about this experience, or any questions that you had, or anything else in general that you would like to share or contribute?

Miguel Cobian 15:31

What do you think would be the immersive technology opportunities for the LGBTQ?

Collin Pullum 15:37

Yes, absolutely. So, I mean, there's quite a few that you touched on already. And even like the angle of healthcare, I don't think folks talk about a lot. But just from what I'm learning through the program, I mean, there have been experiences from previous students in the master's program that were doing research for queer people in rural areas, where, you know, kind of navigating what that way of life is because you know, it's a world where you hear a lot about like rural areas have a lot more conservatism and all kinds of things. But the reality is, is that there's still all kinds of people that exist in those places, right? That may not be as visible or may not be as safe as a place like Portland to be out and proud. And so, you know, I think there is potentially some utility if they're able to get access to, you know, headsets or tools or these more immersive spaces where, you know, we can connect them with folks that are— are out and proud or can tell, you know, LGBT youth about their experiences, because you have the ability to create spaces where multiple people all over the world can be in the same spot, so...

Miguel Cobian 16:51

That's correct, in a way... In a way it would probably connect us even more than we already are connected, right? Because it's going to be more, it's going to feel real to a certain extent. I didn't think about the rural— You know, I can't believe I didn't think about it because I always think about America, you know, and you realize that, you know, again, we're in a bubble. But yeah, I mean, there's so many LGBTQ, especially LGBTQ youth right now. Again, you see the news. You see all the attacks, you know, they're— they're probably if they are in a rural community, probably religious, probably very conservative. And you know, they can question themselves to the point of ending— ending their life. So having that access for them, I think would be lifesaving.

Collin Pullum 17:34

Absolutely. Because it's, it's interesting how, from a few people I've had conversations with just about immersive media. Kind of that instant go to is gaming, which is very true. Like there's plenty of applications that you can use, you know, this immersive tech for entertainment or fun. And even on that vertical of entertainment, I mean, something that I would one day love to help create. I don't know when, I don't know if it'll be with this project. But just the prospect of you know, we use AR on our phones all the time. And so if people were attending a drag show, you know, they can- and are filming on Snap[chat] and you can easily have a filter layered on top of it that just accentuates the performance, you know, it could be timed to a queen or a drag performer doing a certain number, some effect goes off at the same time, it could let people know their Venmo and any other items to like, you know, just so you can tap and you know, really if you're monetarily supporting the community that way because you know, who knows who carries— I mean, people carry cash, but you never know. So just like expanding those options, so it's a little bit more at the forefront. That's something I would love to bring on. I'm not a developer of any kind. So, we'll see maybe after this program, but those are just some of my initial applications, thoughts, and even just from having these conversations. But yeah, just like all kinds of different avenues I think my blind spot and my gap is you know, what are ways in a

political sphere, or maybe less entertainment, but you know, healthcare is another one that's a blind spot for me. Like, I don't personally know anyone in that space, but...

Miguel Cobian 19:24

I can connect you to LGBTQ healthcare people...

Collin Pullum 19:27

That'd be amazing.

Miguel Cobian 19:29

...Whether they're in administration, or they're doctors or...

Collin Pullum 19:31

Yeah, that would be incredible. Just to get another lens, but yeah, that's really what the root of this project is, is like, if we can find that maybe that lead us— that information can lead us where, you know as this technology is going that direction, we have all kinds of people, you know, it doesn't even have to just be queer people, but, you know, different racial backgrounds and all that—t hat are also contributing to the creation of this technology.

Miguel Cobian 20:01

Yeah, that's correct. It's— It's just I mean, interesting times we live in and just to see the potential again, in talking with this new technology. Ooh, and I can actually connect you to a guy that his company, he does like planetarium shows here. His company is all about augmented like... immersive technology. So, I can also connect you with them. Yeah, that would be his—his insight. I don't know if he's LGBTQ... I get a vibe, but I'm not sure [laugher].

Collin Pullum 20:31

Any— Any info in particular would be great. But yeah, anything else that you'd like to add or?

Miguel Cobian 20:38

Um, no. So—so you so you are an advertiser, you work for an ad agency right now. Mad Men, basically. And where do you see yourself like in five to ten years?

Collin Pullum 20:51

That is a great question. A lot, honestly my journey to Portland was to get back into both a graduate program and also just seeing a different walk of life. I had plenty of friends here that convinced me to move out here. And so, starting this program, at the root of it was really trying to figure that out. What landed me in my role now as an Account Coordinator. And I think my goal has always been trying to help individuals be able to tell their stories— that kind of was the foundation of me joining this program. I just enjoy a lot of working with people, that led me into working on agency, but does a lot of... More social campaigns. So, I feel like less icky marketing to people because it's not necessarily you know, putting funding and getting money back that way, but really trying to help brands with aligning themselves with what are the real authentic stories from all kinds of different people, all kinds of different audiences. So that's how I started. As far as in the next five to ten years, I mean fusing my love for just like music and entertainment. Live music in particular, you know, after the pandemic really ravaged that industry, you know, being able to be involved in that and giving people you know, all kinds of different musical experiences and live music experiences, such as stuff that I love.

Miguel Cobian 22:22

I love going to concerts.

Collin Pullum 22:25

That's like my number one thing to do. So, yeah, just seeing if there's legs in getting involved in that industry. You know, finding ways that I can make impactful change. Outside, it used to be very, like politically focused was my original goal, like I was going to do political communication and be Olivia Pope, but life has kind of led me to, you know, being in the agency world and so just kind of seeing where that takes me. Seeing if there's any, you know, initiatives and having more people like myself in that space. Having queer brown people, I'm biracial, my dad's black and my mom's from Austria.

Miguel Cobian 23:09

Oh really? Oh cool.

Collin Pullum 23:10

So just kind of... Being in that space to lend ideas or perspectives I've seen, you know, make small little changes here and there. Or, just give a different perspective that I feel like that industry really needs right now. So yeah.

Miguel Cobian 23:27

That's, that's cool. Yeah, right now, as when you were saying concerts and music I thought about again, immersive. And can you imagine if you were at a concert, and you either have your headset on or you have your phone, and I was just at the symphony a couple of weekends ago, and it would have been great as— if you're play— you know, you're seeing... It's just, it's, it's not vocals right? But what if you saw the notes, and what if that helped you learn music as you were listening to it? Or what if you had like, I don't know, like I guess, like, what do you call it when like, there's a reader and it shows you like, how what he does?

Collin Pullum 24:05

Oh, like, yeah visualizers.

Miguel Cobian 24:07

It's just interesting again, like, you just have to like to have an open mind and be like, "What would you like to see that you don't see?" You know, then that and that will provide it. It'll be provided through either your phone or, your device.

Collin Pullum 24:21

Absolutely. Yeah, so there's, I mean, so many avenues and I think it's an interesting time right now as, as these technologies are becoming more available for the general consumer, you know, and rise in conversation and popularity, AI is a huge thing now. So, it's, I mean, through my time, and yes, like through my time in the program, you know, all these things, all these kinds of moments where it's like "Metaverse" becomes a buzzword and then "AI" becomes a buzzword. You know, it's— it's all going and happening very fast. And so, I think a lot of the ethical conversations right now is trying to get ahead of it, versus what we've seen with social media and all the regulation that's happening now and the impact it's having on society, a lot of people are trying to get at the forefront of that before this technology. It's already being rolled out without guardrails. And so that's why all these flags with AI are happening and immersive tech and it's you know, when industries are really trying to push that technology without knowing the ramifications.

Miguel Cobian 25:32

They just unleash it basically and create monsters.

Collin Pullum 25:36

Exactly. I forgot what publication put it, but one of the examples they gave was... It's like you have Jurassic Park, and there's signage everywhere that says, "Dinosaurs! Be careful." But the gates are open.

Miguel Cobian 25:53

[Chuckles] That's—that's really how it is!

Collin Pullum 25:54

And so that's really the... That's like, the analogy and that's—that's always stuck with me as we've been having these conversations because... It's just this out there. You know, anyone can develop and create you know, all this stuff. And there's a big push for jobs in that industry. But the strategy behind it, I think, is what's missing what a lot of people much higher up and much longer in the industry than me are talking about.

Miguel Cobian 26:20

Like how can they be intentional about the technology and not necessarily like, "Look what we made!"

Collin Pullum 26:24 Right.

Miguel Cobian 26:25

And really, you know, yeah, and you know, we're saying like, "Oh, it might help connect us more" but, you know, yes. Are we more connected, but we're also not in the we're not present?

Collin Pullum 26:34

In the moment. Yeah, yeah. So how to fuse the kind of physical that's happening with... On in these virtual spaces.

Miguel Cobian 26:43

Yeah, that's true. But very neat.

Collin Pullum 26:47

Awesome, awesome, awesome. Thank you so much.

Quantitative Survey

Start of Block: Default Question Block

Welcome

Help us increase immersive technology access for the Portland LGBTQIA+

community! Thank you for your participation in this questionnaire. This survey is being hosted by a graduate student from the University of Oregon's School of Journalism & Communication. We are trying to identify need & desire for immersive tech in the Portland LGBTQIA+ community.

The survey is completely confidential, and no name or identifying information will be associated with any completed responses. There is no consequence for not completing the survey, and you may rescind participation at anytime. This survey is estimated to take 2-3 minutes to complete. While participation of LGBTQIA+ members is encouraged, all are welcome to complete this survey.

Q1 What is your city & state of residence?

Q2 What is your gender identity?

- \bigcirc Man (1)
- O Non-binary (2)
- Genderqueer (3)
- \bigcirc Woman (4)
- \bigcirc Prefer not to say (5)

O Prefer to self-describe, below: (6)

Q3 Do you identify as a member of the LGBTQIA+ community?

Yes (1)	
No (2)	
Prefer not to say	(3)

Q4 Which answer best represents how familiar you are with immersive technology? (i.e., virtual reality, augmented reality, mixed reality, etc.)

	I don't know/prefer not to say (1)	Not at all familiar (2)	Somewhat familiar (3)	Familiar (4)	Very familiar (5)
Virtual Reality (VR) (1)				0	0
Augmented Reality (AR) (2)				0	0
Mixed Reality (XR) (3)				0	0
360° Video (4)		0	0	0	0

Q5 Have you ever used immersive technology before?

Yes (1)No (2)

 \bigcirc I don't know/prefer not to say (3)

isplay This Question:	
If Have you ever used immersive technology before? = No	
Or Have you ever used immersive technology before? = I don't know/prefer not to say	

Q6 Would you be open to trying an immersive experience if you had the opportunity? (i.e., wearing a virtual headset, watching a 360° video, etc.)

• Yes (1)

O No (2)

I don't know/prefer not to say (3)

Display This Question:

If Have you ever used immersive technology before? = Yes

Q7 Have you participated/played any of the following immersive experiences? (Please select all that apply)

Beat Saber (1)
Pokémon GO (2)
Snapchat Filters (3)
Playstation VR (4)
Horizon Worlds (5)
TikTok Effect House (6)
360° Video (7)
Other (write below) (8)

Q8 Which of the following industries do you think immersive technologies could be used in? (Please select all that apply)

Gaming (1)
Arts & Entertainment (2)
Community Engagement (3)
Politics & Government (4)
Healthcare (5)
Education (6)
I don't know/prefer not to say (7)
Other (write below) (8)

Q9 Please select the option that best aligns with your attitude towards the following statement: I'm excited by the growing popularity of immersive technologies like virtual reality, augmented reality, etc.

Strongly agree (1)

Somewhat agree (2)

• Neither agree nor disagree (3)

Somewhat disagree (4)

Strongly disagree (5)

Q10 Would you ever consider spending money to participate in an immersive experience? (i.e., purchasing a virtual headset, buying an AR app experience, visiting an immersive museum, etc.)

Yes (1)
Maybe (2)
No (3)
I don't know/prefer not to say (4)

J609 Immersive Survey Report (Results)

Default Report

J609 Immersive Access Survey May 30th 2023, 2:38 am MDT

Q1 - What is your city & state of residence?

What is your city & state of residence?

Seattle, WA

Richmond, VA

Englewood, Colorado

Portland, OR

Portland, OR

Portland, OR

Avondale, AZ

San Diego California

Portland, OR

Portland

Portland OR

Portland, OR

San Diego, CA

New York, New York

Seattle, WA

San Diego ca

Phoenix, AZ

Portland

Flagstaff, AZ

Chandler Az			
Portland OR			
Cincinnati, OH			
Boston, MA			
Richmond, Virginia			
Portland, OR			
Orlando, FL			
California			
Portland, Oregon			
Portland Or			
Phoenix AZ			
Portland, Oregon			
Sydney, Australia			
Downey California			
PDX, OR			
Portland, Oregon			
Sierra Vista, Arizona			
Portland, Or			
Los Angeles CA			
Loveland, Colorado			
Portland, Oregon			
Vancouver, WA			
Bend, Oregon			
Portland, OR			
San Francisco CA			
Portland, Oregon			
Seattle Washington			
Portland, OR			

Arizona

Portland, Oregon

Portland Or

Portland, OR

Q2 - What is your gender identity?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender identity? - Selected Choice	1.00	4.00	2.45	1.40	1.97	51

#	Answer	%	Count
1	Man	43.14%	22
2	Non-binary	11.76%	6
3	Genderqueer	1.96%	1
4	Woman	43.14%	22
5	Prefer not to say	0.00%	0

6	Prefer to self-describe, below:	0.00%	0
	Total	100%	51

Q2_6_TEXT - Prefer to self-describe, below: Prefer to self-describe, below: - Text



Q3 - Do you identify as a member of the LGBTQIA+ community?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you identify as a member of the LGBTQIA+ community?	1.00	2.00	1.39	0.49	0.24	51

#	Answer	%	Count
1	Yes	60.78%	31
2	No	39.22%	20
3	Prefer not to say	0.00%	0
	Total	100%	51



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Virtual Reality (VR)	2.00	5.00	3.25	0.81	0.66	51
2	Augmented Reality (AR)	2.00	5.00	2.69	0.84	0.70	49
3	Mixed Reality (XR)	2.00	5.00	2.30	0.62	0.38	47
4	360° Video	2.00	5.00	3.21	0.92	0.85	47

#	Question	Not at all familiar		Somewhat familiar		Familiar		Very familiar		Total
1	Virtual Reality (VR)	13.73%	7	56.86%	29	19.61%	10	9.80%	5	51
2	Augmented Reality (AR)	48.98%	24	38.78%	19	6.12%	3	6.12%	3	49
3	Mixed Reality (XR)	76.60%	36	19.15%	9	2.13%	1	2.13%	1	47
4	360° Video	25.53%	12	36.17%	17	29.79%	14	8.51%	4	47



Q5 - Have you ever used immersive technology before?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you ever used immersive technology before?	1.00	3.00	1.47	0.54	0.29	51

#	Answer	%	Count
1	Yes	54.90%	28
2	No	43.14%	22
3	I don't know/prefer not to say	1.96%	1
	Total	100%	51



Q6 - Would you be open to trying an immersive experience if you had the opportunity? (i.e., wearing a virtual headset, watching a 360° video, etc.)



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Would you be open to trying an immersive experience if you had the opportunity? (i.e., wearing a virtual headset, watching a 360° video, etc.)	1.00	1.00	1.00	0.00	0.00	22

#	Answer	%	Count
1	Yes	100.00%	22
2	No	0.00%	0
3	I don't know/prefer not to say	0.00%	0
	Total	100%	22

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Q7 - Have you participated/played any of the following immersive experiences? (Please select all that apply)



#	Answer	%	Count
1	Beat Saber	5.62%	5
2	Pokémon GO	20.22%	18
3	Snapchat Filters	29.21%	26
4	Playstation VR	10.11%	9
5	Horizon Worlds	3.37%	3
6	TikTok Effect House	12.36%	11
7	360° Video	16.85%	15





Q8 - Which of the following industries do you think immersive technologies could be used in? (Please select all that apply)

#	Answer	%	Count
1	Gaming	20.54%	46
2	Arts & Entertainment	20.98%	47
3	Community Engagement	12.95%	29
4	Politics & Government	8.04%	18
5	Healthcare	16.52%	37
6	Education	20.09%	45

7	I don't know/prefer not to say	0.00%	0
8	Other (write below)	0.89%	2
	Total	100%	224

Q8_8_TEXT - Other (write below)

Other (write below) - Text

I feel it could technically be used for all of these, just in different ways.

Research Development

Q9 - Please select the option that best aligns with your attitude towards the following statement: I'm excited by the growing popularity of immersive technologies like virtual reality, augmented reality, etc.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Please select the option that best aligns with your attitude towards the following statement: I'm excited by the growing popularity of immersive technologies like virtual reality, augmented reality, etc.	1.00	5.00	2.34	1.01	1.02	50

#	Answer	%	Count
1	Strongly agree	20.00%	10
2	Somewhat agree	42.00%	21
3	Neither agree nor disagree	26.00%	13

4	Somewhat disagree	8.00%	4
5	Strongly disagree	4.00%	2
	Total	100%	50

Q10 - Would you ever consider spending money to participate in an immersive experience? (i.e., purchasing a virtual headset, buying an AR app experience, visiting an immersive museum, etc.)



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Would you ever consider spending money to participate in an immersive experience? (i.e., purchasing a virtual headset, buying an AR app experience, visiting an immersive museum, etc.)	1.00	3.00	1.80	0.72	0.52	50

#	Answer	%	Count
1	Yes	38.00%	19
2	Maybe	44.00%	22
3	No	18.00%	9
4	I don't know/prefer not to say	0.00%	0

Total	100%	50
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