

# XR & Museums: Mixing Disciplines, Extending Boundaries, and Delivering Multi-Modal Experiences in a Post-COVID World

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Our talk demonstrates and elaborates upon the ways in which the development of mixed reality with museum partners can, and has, fostered the mixing of disciplines among academic faculty, thereby encouraging the breaking down of silos in the university environment.

## I. XR & MUSEUMS

The use of mixed reality (XR) technology is not necessarily new to some museum environments, but its development in conjunction with university partners to museums has proven a beneficial and useful opportunity to bring disparate groups of faculty and students together in a collaborative effort. The creation of XR experiences for museum goers calls upon an expansive skill set—from content curation to narrative delivery, interface design, 3D asset creation and performance capture.

The project began with students and faculty in the liberal arts museum studies program and the computer science department. It grew to include team members from art and design, performing arts and music, with the goal of creating an XR experience that would serve the public. Working in partnership with Genesee Country Village & Museum, the team sought to deliver humanities-rich content in the form of a digital docent, modeled after a resident of western New York in the 19<sup>th</sup> century, who will guide visitors online and onsite at a living history museum in NY state. The content is presented conversationally with pauses for question and answer, through the use of augmented reality devices, as well as online in virtual reality spaces, as a means of demonstrating enhanced storytelling capabilities. This varied group of faculty and students would have little call to collaborate if not for the opportunity to bring a mixed reality experience to a museum audience.

## II. EXTENDING BOUNDARIES

The collaborative process of such a diverse assemblage led to a broader view of the project; allowing for multi-faceted ideation, faster prototyping, and the ability to pivot and change tack when faced with new and evolving challenges. The onset of a global pandemic and the subsequent closure of museums proved a test of the group's boundaries and created opportunities for expanding our reach and goals.

## III. DELIVERING EXPERIENCES

Our deliverables will lay the foundation for a multi-modal deployment that responds directly to the devastation of the landscape museum interactives have experienced in the time of COVID-19. Our technology meets visitors where they are: whether at home or otherwise online away from the museum; onsite at the museum using one's own device; or a provided device.

## IV. CONCLUSION

The development of XR experiences for our museum partner called upon the disciplines of three colleges and no fewer than six programs at the university. The collaborative effort broke down the silos of academia and fostered a deeper communication that we think can transfer to a variety of interdisciplinary projects.

## V. ACKNOWLEDGMENTS

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