



*The Colosseum district.* Credit: Rome Reborn®

## EXPLORING THE COLOSSEUM IN ROMAN TIMES. TECHNOLOGY AND COMMUNICATION FOR CULTURAL HERITAGE

We all would like to know our heritage better, right? Researchers try to make the experience of understanding cultural heritage better by determining what the visitors at the heritage site expect and what is the message the cultural heritage is communicating. My project will help these researchers to bring out better communication through the use of digital technology to make it more exciting for anyone who visits a heritage site, museum or exhibition physically as well as virtually.

Remember our childhood visits to museums or heritage sites? Did you always wonder why these adults would go to such an uninteresting place? And do you think your perspective has now changed? If so, it is because researchers, curators, and creators are constantly trying to make these places more engaging using innovative techniques of information dissemination. It is a combination of science and art that has been brought together to enable a better appreciation of cultural heritage by everyone. So nowadays you may have heard of or gone to museums or exhibitions with some amazing technological installations like holograms, audio-visual elements, speaking interactive exhibits and even games.

My supervisor and I are working on helping to create better communication environments. Any user experiencing a digital environment should find it easier to understand the communication about the cultural heritage within that environment: this is our goal. We are trying to achieve it by understanding what components make a user feel engaged and learn better. Let me give you an example. Imagine I give you an AR (Augmented Reality) headset and glasses that you can wear and go anywhere. Imagine walking around your neighborhood wearing it and that everywhere you look at the

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device will let you find out the historical facts and trivia about the place, building, street, object etc. Imagine discovering that the shop where you buy bread everyday was the favorite one of a famous writer or the park you go running on everyday was the site of a royal palace that could not survive an earthquake. Would it not be amazing to go on exploring?

Now, our job as researchers is to find out how to best deliver this information. Would it be better to display the information on the glasses or would it better to deliver such information as audio snippets? Will it be even better to do both? What works best, all things considered? We are trying to understand these kinds of situations and answer such questions in order to create models that make message communication easy and interesting. And we are focusing not just on the message but on other aspects of technology like augmented reality, virtual reality, mixed reality or more, but also the presentation and usage of apps, games, audio-guides, tours etc. and several other such nuances that can make cultural heritage communication more exciting.

Once we find the many components that can make an environment exciting, we will design our own environment to test these inferences. It's like when you read a book and then watch a movie based on it. You know the whole story, but you enjoy how the director has set-up the story putting together cinematography and creativity. In our case take a cultural heritage monument like the Colosseum in Rome: we all celebrate it because it is still there for us to visit but only in movies like *Gladiator* do we see the actual use of the amphitheater in its time.

Likewise, we are planning to use two such cases of tangible heritage sites or cases that can be tested through a digital method of communication across various components already identified in order to understand what suits best and what doesn't do it great. At the end, the outputs of the research will be collected in a set of guidelines that can be used when such an environment needs to be designed.

It might not help every user directly but my research will ultimately help the designer to start creating an environment not from scratch but from a point where the results can be predicted and have already been successful.