



ABSTRACT SUBMISSION

An Artificial View of Historical Photographs of Persepolis

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Abstract

This project focuses on the systematic catalogue and organization of historical imagery reproducing monuments of pre-Islamic Iran, with the aim to improve their access and use for research and conservation purposes. It stresses the importance of these documentary sources for our understanding of monuments that have been seldom excavated, and sometimes restored, but could have been also heavily damaged, or even disappeared, over time. In such a frame, historical images are invaluable documents to assess the evolution of ancient sites. The project's methodology leads to the creation of a protocol, and to the definition of a specialized vocabulary, developed thanks to manual annotation of images, which describe architectural elements and their deterioration uniformly. A visual vocabulary, envisioned to reflect monumental features in the most accurate manner, facilitates the consistency of descriptions and supports the automation of annotations via convolutional neural networks (CNNs). The so-called Tachara of Persepolis has been selected as main case study. Historical imagery of the Tachara was thus annotated and integrated into a Heritage Building Information Modeling (HBIM) model, combining visual and technical information on one platform. This approach offers a contribution to the management and preservation of historical images, with applications in archaeological contexts for comparative analysis.

Keywords

Historical photographs, CNN, pre-Islamic Iran, computer vision, HBIM

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