

**Documenting and Mining Museum Big Data:  
challenges addressed by a new research project in Qatar**

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This paper presents preliminary results of the first year of a research project on Museum Big Data and data mining, attempting to address ethical, contextual and methodological challenges in datasets from museums of Qatar. We aim to contribute to the development of Big Data and Data Mining methods and techniques on museum datasets by exploring and case-studying available museum datasets from Qatar, as well as to contribute towards new Big Data policy documents via relevant policy research. In Qatar, as elsewhere, Big Data and data mining processes comprise relatively new fields in museum research and inquiry, which are expected to become core disciplines as museum data input increases and digital museum data collections from museums' everyday activities and operations become larger and larger. Modern museums all over the globe maintain and expand dynamic databases and Big datasets on museum objects and operations as well as generated data extending from visitors numbers, times and stops to tweets, likes and shares. There is an emerging need to detect new and discover hidden and useful information, patterns, clusters and relationships among large sums of museum data. To address this need, we require ethical considerations and processes, a thorough understanding of contexts in the real and the digital world, and cross-disciplinary Big Data methods, techniques and testing, all of which fall within this new project's (and this paper's) objectives and discussion points.