

# Association Rule Mining to Assess User-generated Content in Digital Heritage

## Participatory Content Making in ‘The Museum of Gamers’

Serdar Aydin <sup>1</sup>[0000-0001-6445-8879], Marc Aurel Schnabel <sup>2</sup>[0000-0002-2923-1609] and Iman Sayah <sup>3</sup>[0000-0002-4395-4475]

<sup>1,2</sup> School of Architecture, Victoria University of Wellington, Wellington, New Zealand  
{serdar.aydin, marcaurel.schnabel}@vuw.ac.nz  
iman.sayah@gmail.com

**Abstract.** Association rule mining is one of several approaches in game design for discovering correlations among user-generated content items. This paper aims to aid the digital heritage field by analysing user preferences in interactive environments designed for participatory cultural heritage making. Textual and diagrammatic explication of the feedback mechanism introduces the universalization of the knowledge gained in this research that is supported with the outcome of a workshop which offered two gamified interactive environments. Three key pleasures of cyberspace in digital heritage are extended from immersion to meaningful experience and to transformation. User-generated content engenders meaningful correlations that help improve and evaluate digital heritage applications. Qualitative findings explicate the relationship of ‘The Museum of Gamers’ with the authenticity issue. This paper is among the first to investigate the association rule finding methods in relation to indexical authenticity in digital heritage.

**Keywords:** Digital heritage · Game analytics · Association rule mining · User-generated content · The Museum of Gamers