

Digitising Garment Artefacts for An Interactive Learning Experience

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Abstract

In this uprising era of mobile devices, digital technology, the way one engages with history is changing too. This research embraces 3D digital technology as a solution to study garment artefacts, with an aim to faithfully recreate them digitally, and develop an interactive learning experience surrounding the contextual background behind these garments. As a form of material culture, garment artefacts embody in-depth qualitative information that informs the viewer on historical, cultural, social contexts of the given period, as well as pattern cutting, construction, and simulations. 3D reconstructed garment artefacts enable such access without constraints of time and space, allowing more interest and information in circulation. A practice-based methodology guided by a literature review of relevant academic research has been developed to enable a loyal depiction of garments in the digital realm, and the incorporation into an interactive Virtual Reality learning experience. Object-based research, contextual research, and rigorous analysis provide an accurate set of information surrounding a set of denim artefacts, enabling relevant subsequent steps of digitisation in CLO 3D, texturing in Substance Painter and Virtual Reality experience in Unreal. The execution of this research suggests a promising avenue for further amplifying 3D technology's potential in research, exposure, and practical implementations of fashion history.

Keywords: digital fashion, 3D technology, fashion history, Virtual Reality (VR), interactive learning

