VEC VIRTUAL ENGINEERING CENTRE

I have had the opportunity to collaborate with a diverse team with unique backgrounds and experiences, supporting various sectors and ambitions. My primary responsibilities have revolved around creating virtual environments for digital heritage campaigns, in addition to contributing to broader initiatives such as the Metaverse.

WIKTORIA PLOCH

INTERN TO METAVERSE DEVELOPER

PROJECTS

> ### Developing Immersive Virtual Walkthroughs of Heritage Sites using Drone Footage

Furness Abbey, a former monastery in Cumbria, has been captured through drone footage to create an interactive virtual environment. This approach is ideal for heritage sites as it preserves the site while making it more accessible to the public, with additional educational resources such as multimedia assets providing a deeper understanding of the site.

Wiktoria is now working on adapting the model for VR headsets, with the possibility of incorporating omnidirectional treadmills for a more immersive experience.

In the future, interactive avatars or "meta humans" could be included in these virtual environments, providing guests with the opportunity to interact with famous figures and ask questions about their lives and accomplishments through AI technology.

> ### Exploring the DIF Building's Exterior and Communal Areas with Matterport Scans

Matterport scanning can enable virtual guests to tour our innovative world-class facility via a seamless experience that links together scans and includes bespoke tags. The immersive experience allows the user to select which floor to explore and ride the lift to that floor, creating an even more realistic experience.

> ### Developing 3D Models from 2D Photography: Innovative Techniques and Tools

Wiktoria has been researching new methods for effectively creating 3D models from 2D photographs and imagery. The research explores how to capture and refine the clarity and accuracy of models by removing imperfections such as shadows.

This research has uncovered new ways to create custom 3D models using AI tools that generate bespoke imagery based on descriptive text that can support artists in creative endeavours.

The comprehensive findings and recommendations are to be compiled into a report that will play a crucial role in supporting informed decision-making for identifying the most promising tools for projects in the future.

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🌐 www.virtualengineeringcentre.com

BACKGROUND

Bachelor of Science - BS, Computer Science at the University of Liverpool

SKILLS

- Computer Science
- Matterport Scanning
- Unreal Engine
- Unity Development
- Developing AI Systems

INTERESTS

- Metaverse
- Machine Learning
- Artificial Intelligence
- Computer Games Development
- Cybersecurity

UNIVERSITY OF LIVERPOOL