❝ VEC

After starting my internship here at the VEC in Summer 2023 I experienced significant growth in my knowledge and skills, especially with my understanding of VR, Unreal and Unity. Being integrated into the wider technical team has also given me the amazing opportunity to work on multiple projects all supported with access to the latest cutting-edge technologies within a world-class laboratory.

CAMRAN QADEER

VIRTUAL REALITY DEVELOPMENT INTERN

📍 Sci-Tech Daresbury, WA4 4AD

🌐 www.virtualengineeringcentre.com

PROJECTS

› Walking through history via interactive and immersive demonstrations

The newly established National Centre for Digital Heritage has a unique omnidirectional treadmill that displays digital heritage case studies and demonstrations through innovative and interactive methods. With the aid of a virtual headset, users can enter remote cultural locations including museums from all over the world.

This technology enhances interactivity and realism, as users can physically step through numerous locations, navigating around multiple venues. Fully engaging with the virtual environment could lead to more immersive experiences, greater inclusivity and accessibility, in addition to reduced time during planning processes.

The interactive VR experience also offers a safe environment for visitors to explore potentially hazardous locations, such as archaeological digs or structures damaged by natural disasters.

› Converting distributed simulation of Mars into immersive virtual experiences

The VEC created a virtual Mars environment to simulate the surface operation of NASA's Mars 2020 Mission. This includes 3D models of the Perseverance and Ingenuity vehicles, a habitat demonstration unit, a space exploration vehicle, and a third-person astronaut player. The mission aims to explore the Red Planet, search for microbial life, collect rock and soil samples for return to Earth, and test new technologies.

This project has now successfully been converted into an even more immersive VR experience, making it accessible outside of the laboratories in addition to improved exploration as astronauts are available to walk more freely than in previous versions. This virtual environment can now be upscaled to more accurately represent Mars and activities placed here such as exploration and even colonisation.

🎓 BACKGROUND

BEng Computer Science at the University of York

SKILLS

- Computer Science
- Human Computer Interaction
- Unity
- Python (Programming Language)
- Unreal and VR development

INTERESTS

- Motorsports and F1
- Digital Engineering
- User Experiences

UNIVERSITY OF LIVERPOOL