

KOMPUTIKA

October 2024
Issue 2

NEWSLETTER

Pioneering the Future: FCSIT UM's Virtual Reality Innovations

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AFFILIATION

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Department of
Computer Systems and
Technology



Multimedia Lecturers and Students @MyDigitalMaker Fair 2024.

Virtual Innovations

@MyDigitalMaker Fair 2024

– By Nurul Fazmidar Mohd Noor, Hannyzzura Affal, Mas Idayu Sabri, Nornazlita Hussin

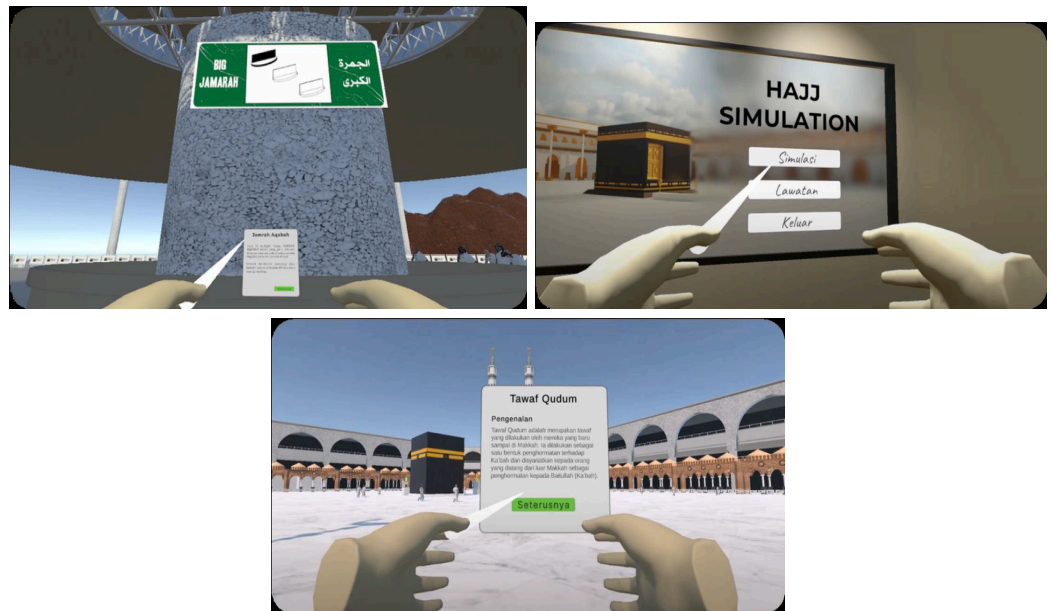
Transforming Learning, Therapy, and Safety Training Through Virtual Reality

The Faculty of Computer Science and Information Technology at the University of Malaya recently showcased four innovative virtual reality (VR) projects at the MYDIGITALMAKER Fair 2024, held from September 13 to 15 at Kuala Lumpur Convention Centre. MyDigitalMaker Fair objectives are i) to celebrate digital creativity and innovation of students ii) to bring awareness to parents on future career opportunities driven by the fast-paced advancement of technology and iii) to improve educators' capacity building through reskilling in teaching and learning. These initiatives demonstrate the university's dedication to leveraging VR technology to improve education, cultural engagement, mental health treatment, and first-aid training.

Metaverse Hajj Simulation: Empowering Pilgrims with Virtual Preparation

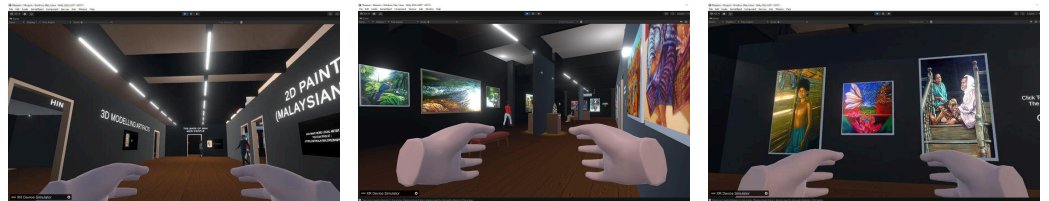
This project is developed by Mohd Khairulhidayat bin Khalid, supervised by Dr Nurul Fazmidar Mohd Noor in collaboration with the Faculty of Islamic Studies and Tabung Haji. This study aims to help pilgrim learners better understand the Hajj rituals. This project provides Muslims with the opportunity to familiarize themselves with key pilgrimage rituals in a simulated environment. Information shown in the simulation is based on the 'Nota Asas Kursus Haji' by Tabung Haji and sources from qualified collaborators.

The simulation uses precise 3D modeling to recreate essential sites such as the Masjidil Haram and Arafat Mount, offering pilgrims practical insights that enhance their pilgrimage experience. Important landmarks included in the simulation are the Masjidil Haram, Safa and Marwah, Arafat Mount, and Mina.



Virtual Museum of Digital Arts: Bringing Art to Life through Virtual Reality

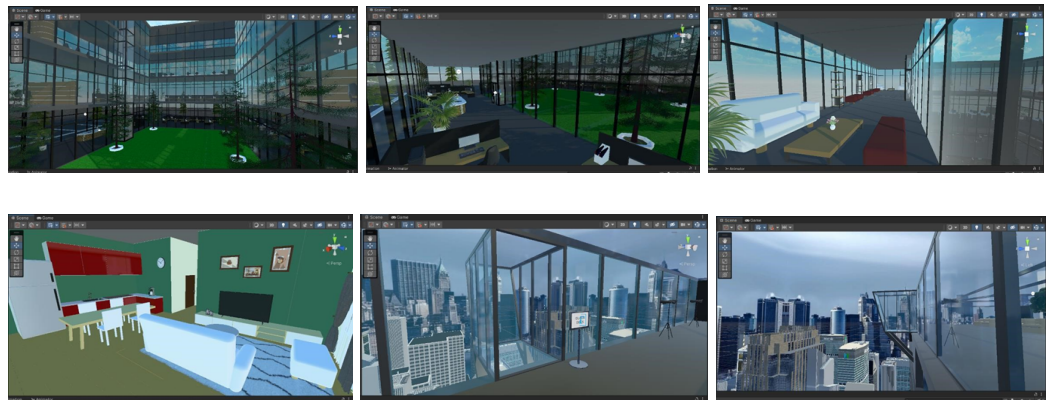
This project is developed by Abdul Azim Mat Ghani, supervised by Mdm Hannyzura Affal in partnership with the Museum of Asian Art, University Malaya. The Virtual Museum of Digital Art offers an immersive experience similar to visiting a physical museum. It features a simulation mode that replicates museum tours, 3D models of Hinduism and Jainism artifacts with detailed information, and a variety of 2D paintings by local artists, each accompanied by artist details. The project leverages digital technology to introduce users to the world of digital art with an immersive artistic experience.





Virtual Reality Exposure Therapy (VRET): Overcoming Fear of Heights through Immersion

This project is developed by Nurhasya Mir Munir and supervised by Dr Nurul Fazmidar Mohd Noor. Expert collaborator for this project is Dr. Aida Syarinaz Binti Ahmad Adlan, from Department of Psychological Medicine, University Malaya Medical Centre. VRET:Acrophobia offers a controlled environment for individuals with acrophobia, enabling them to gradually confront their fear of heights. The goal is to promote cost, time and energy saving for both patient and therapist while effectively undergoing essential treatment. Exposure therapy involves systematically exposing the patient to the feared scenario (heights) to help promote habituation and reduce conditional fear response which allows the patient to feel more in control and less scared over time by becoming more adaptive to the situation. The therapy provides various virtual settings, ranging from a low-level office space to a high observation deck with cost-effective and flexible treatment options that promotes mental well-being.



V-FAST: Virtual First Aid Simulation Training for Emergency Preparedness

This project is supervised by Dr Nurul Fazmidar Mohd Noor and developed by Muhamad Rafiq Iqbal Samsuri. The collaborator for this project is MAB Academy Sdn Bhd. V-FAST aimed to develop a virtual simulation as an alternative platform for first aid training. The goal is to help cabin crew be better prepared, more confident and capable of managing medical emergencies in real time. The V-FAST project is designed to enhance first-aid training, particularly for cabin crew and other professionals. The simulation offers two distinct modes: a Learning Mode, where participants can access multimedia resources about emergency signs and treatments, and an Assessment Mode, Trainees will be assigned random emergencies and after completing the assessment report are given for review. V-FAST provides an engaging and interactive training experience.



	<p>MYDIGITALMAKER Fair 2024, demonstrating applications in addressing modern challenges across various fields. The event attracted significant interest and highlighted the transformative potential of immersive technology.</p>
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Looking Ahead: Shaping the Future through VR Innovations

These VR innovations represent a major step forward in education, healthcare, and professional training. These exciting projects demonstrate how virtual reality can transform learning, art, and therapy, offering both professionals and the public access to advanced tools for growth and development. As these projects continue to evolve, they promise to inspire new applications of virtual reality that enhance accessibility, knowledge, and well-being across diverse communities.