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INVENTION AND INNOVATION EXHIBITION (I-JaMCSIIIX) 2023

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Flood Wise: Mobile Virtual Reality for Flood Preparation Awareness

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Abstract—Enhancing evacuee safety is a key factor in reducing the number of injuries and deaths that result from flood disaster. With the advancement of modern technologies, Virtual Reality (VR) plays an essential role for people employing simulation training. VR represents a technique that may overcome the limitations of traditional training approaches. By being wholly immersed in the virtual environment, people are capable of practicing the required skills without being threatened with their lives before experiencing the real-world situation. This paper presented a work-in-progress Virtual Reality application called Flood Wise to help young adults get used to flood disaster circumstances. A scenario of a house was created with a different height level of water during the flood environment in the scene. Flood Wise provides guidance and essentials to evacuate from flood circumstances safely. The purpose of this study is to design a platform where the youth can interact and improve their survival skills, to develop a flood simulation environment and to evaluate the awareness of youth. The project uses Rapid Application Development (RAD) methodology for constructing the project as it provides a fast, reliable, and stable development process. The Flood Wise was implemented in Unity3D.

Keywords—flood preparation, virtual reality, flood disaster, disaster preparedness, Malaysia



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