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Enhancing Engineering Education with Augmented Reality Visualization

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Abstract: *An augmented reality mobile app is an application that overlays digital content on top of the real-world environment through a mobile device's camera. Our project, named ARchino, is an augmented reality mobile application designed to assist users in visualizing hardware components in a 3D model format. The application utilizes the Vuforia engine for database management and Unity software for 3D model integration. The project aims to improve the user experience in understanding and identifying the hardware components by providing an interactive and immersive experience. The goal of this project is to develop an augmented reality (AR) app used for self-paced learning. This AR app allows IT students to learn about different components of computer hardware in a more interactive and engaging way. AR apps use 3D models of computer hardware components such as CPUs, servers, Keyboard, Mouse and other hardware components. Students can use AR app to view these components in a 3D layered structure, giving them a clear understanding of the various layers and their relationships. The AR app also allows students to rotate and zoom in/outon components, and learn about the different specifications of each component. Overall, this AR app has the potential to revolutionize engineering education by providing students with a more engaging and interactive way to learn about computer hardware.*

Keywords: Augmented Reality, Mobile App, Vuforia SDK, Unity3D, Blender, AR Camera, 3D Model

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