

INTEGRATION OF AUGMENTED REALITY TECHNOLOGY AND APPLICATION PROGRAMMING INTERFACE IN MILITARY WEAPONS EDUCATION APPLICATIONS

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ABSTRACT

Ownership of firearms and missiles throughout the world is a major security problem. Education and understanding about military weapons is very important for society. This application uses Augmented Reality (AR) technology on Android smartphones to increase understanding of the types of military weapons and their dangers. This application development process includes problem identification, data collection, system analysis, implementation, and testing. The Augmented Reality (AR) method used in this application involves the use of markerless and marker-based methods. In addition, Application Programming Interface (API) to update weapon information and quizzes automatically. The application was tested with a black box which showed the output results as expected, angle testing at a distance of 45°-180°, testing at a distance of 6-150 cm and the light intensity of the lamp with a brightness of 25%-100% results, the application can run well displaying 3D objects and presenting information in the form of military weapons education in an interesting and interactive way using Augmented Reality (AR).

Keywords: *Augmented Reality, Application Programming Interface, Markerless, Markerbase.*