**ABSTRACT**

Android powers millions of mobile devices in more than 190 countries around the world. It’s the largest installed base of any mobile platform and growing fast every day, another million users power up their Android devices for the first time and start looking for apps, games, and other digital content. Android is a software bunch comprising not only operating system but also middleware and key applications. In this project, we present an android application using Augmented Reality which allows a user to try on virtual Jewels. The user pose and depth is tracked using the mobile’s camera and virtual jewels are aligned with the tracked user. The jewel moves and folds realistically and the lighting intensity of the jewel render is adapted to match ambient lighting conditions. The presented application improves on related augmented reality application by adding user pose tracking and by using jewel models combined with jewel simulation instead of 2D images.

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**LIST OF ABBREVIATIONS**

API - APPLICATION PROGRAMMING INTERFACE

GUI - GRAPHICAL USER INTERFACE

JDK - JAVA DEVELOPMENT KIT

SDK - SOFTWARE DEVELOPMENT KIT

URL - UNIFORM RESOURCE LOCATOR

VFR - VIRTUAL FITTING ROOM

XML - EXTENSIBLE MARKUP LANGUAGE