

## **Immersive virtual reality application development using high tech computer vive and high-end laptop**

### **ABSTRACT**

In this century, the use of computer simulation to increase user experience called Virtual Reality (VR) has expanded in the real-life learning contact, which was adopted into practice since 1980s and quick to become a trend in the computer-based simulation world. This study was determined to increase and improve the aspects of trainings, which involves remembering the detailed engine parts assembly among engineering graduates. Currently, the practice requires actual training in the field of automobile engine components assembly. In order to solve this problem, this on-going research proposes a special immersive virtual engine components assembly for students' selfdirected learning. In this study, five main software were used such as CATIA V5 software to produce the 3D engine components, Blender software, Unity3D, Steam VR software and Vive software, and most importantly the HTC vive hardware for VR immersion so that students can appreciate it physically and emotionally through the new virtual interface. Based on the experiment, the data from the respondent will be collected and analysed, and specific test to determine the effectiveness of this application will also be compared with the traditional method.

**Keyword:** Assembly; Automobile engine; Components; Fully immersion; Learning purpose; Student; Virtual reality