

## **ABSTRACT**

*This Research explains how to design and implement car security system based on face recognition using an application based on android operating system as controller. The method used in this research is Local Binary Patterns (LBP). The Camera that located in car dashboard will recognize user's face, if it's match, relay will connect the electric current from the battery to the dynamo starter so the engine can be activated. There will be some message that will be sent to smartphone as notification if face recognition accepted, face recognition failed, relay successful activated and deactivated by the app in smartphone. Overall, the successful rate of the system reach 98.5%. The experiment of this research shows that bright light condition with smile expression gave the best result with 100% successful rate and the mean of confidence value is 20,06547 and 2.6883 seconds for computing time.*

*Keywords : Face Recognition, Car Security System, Car Engine Control, Local Binary Patterns, Raspberry Pi.*