

Design and Development of an Access System for a Car using Bluetooth and Face Recognition



A. Shailendra

dalu1061@gmail.com
Ph. No: 0 98801 45820

Student's Name	A. Shailendra	AEL (FT-2012)
-----------------------	----------------------	----------------------

Academic Supervisor(s)	Z. Tracy Austina and S. N. Nagananda
-------------------------------	--------------------------------------

Industrial Supervisor(s)	
---------------------------------	--

Keywords: RKES, PKES, Face Recognition, Bluetooth, GSM

Abstract:

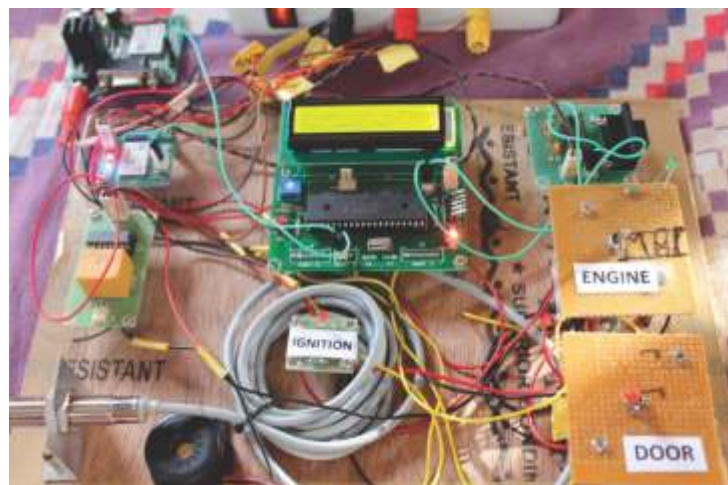
Sophisticated keyless entry systems provide increased security and convenience. Keyless entry systems could overcome key guessing attack and statistics attack. Cost is a major hindrance when it comes to integrate these systems in low segment cars. There is dearth for highly secured and cost effective techniques to overcome the attacks. In this project a secured access system based on Bluetooth and face recognition algorithms is implemented.

In this project, an attempt to implement a more secured system is made by combining advantages of Bluetooth and face recognition. In case of loss of physical key/remote, mobile phone installed with Android app can be used to access the car which acts as key. The access system is designed using PIC18F458 microcontroller and the face recognition algorithms is designed using PCA. Various subsystems like Bluetooth module, door module, GSM module, ignition module and engine module are integrated to the controller PIC18F458.

The developed access system is tested successfully for different subsystems using test cases and the functionalities are verified. Test cases were generated for pairing, communication between the mobile and the access system, face recognition to validate the access system. In future, the range of Bluetooth can be increased by selecting a Bluetooth module with wider range and automatic locking/unlocking of doors can be implemented if the system is found in the region of the access system.



Mobile application



**Access system for a car using bluetooth
And face recognition**