Ministry of Higher Education

Pyramids High Institute (PHI) for Engineering and Technology

Electronics and Communication Engineering Department

معهـــد الأهرامات العالى للهندسة والتكنولوجيا

P.H.I For Engineering and Technology

Gps Tracking And Anti-Theft Device For Real Vehicles

Team Members :

Abdelrahman Shrief	Mohamed Alaa
Asmaa Mohamed	Mohamed Nageh
Sondos Reda	Mahmoud Gaballah
Mohamed Hossam	Moamen Morad

Under Supervision:

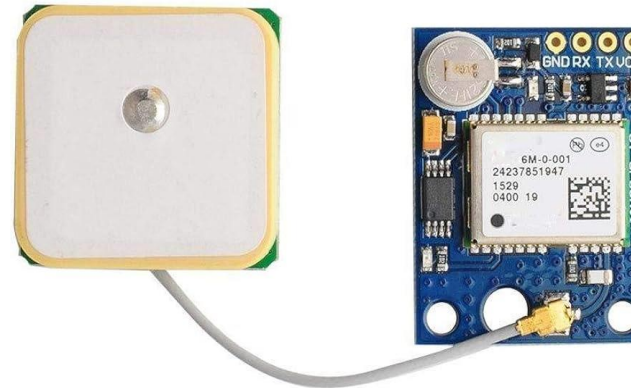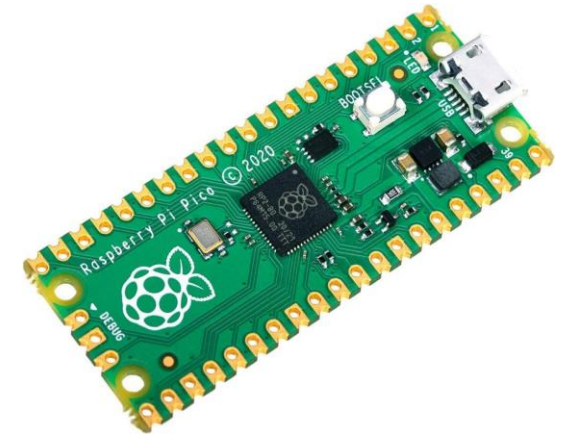|	
Dr. Gamal Elshiekh	Dr. Walaa Omar
Dr. Heba Emara	Dr. Hanaa Ezzat
Dr. Esraa Elrefaay	

Components

GSM SIM800I V2.0
450LE

OV7670
175LE

GPS Module Neo-6
LE550

Raspberry pi pico
660LE

Components

ESP 32
425LE

Arduino uno R3
440LE

Usage of Hardware Components

Arduino Uno R3

Controls the motors

ESP32

Acts as a web server for remote control and data visualization. Communicates with the Arduino. Connects to the GSM module for internet connectivity and user communication.

Raspberry Pi Pico

Processes images or videos captured by the camera. Runs machine learning algorithms.

GPS Neo 6M Module

Provides real-time location data.

GSM SIM800L V2

Enables communication with the user through SMS or calls. Provides internet connectivity.

OV7670

Captures images or videos.

Project idea

- The main purpose of the project is to provide a reliable anti-theft system aiming to significantly boost vehicles security which in return would deter or mitigate vehicle theft cases.

- We plan to achieve this using innovative and cutting-edge technologies.
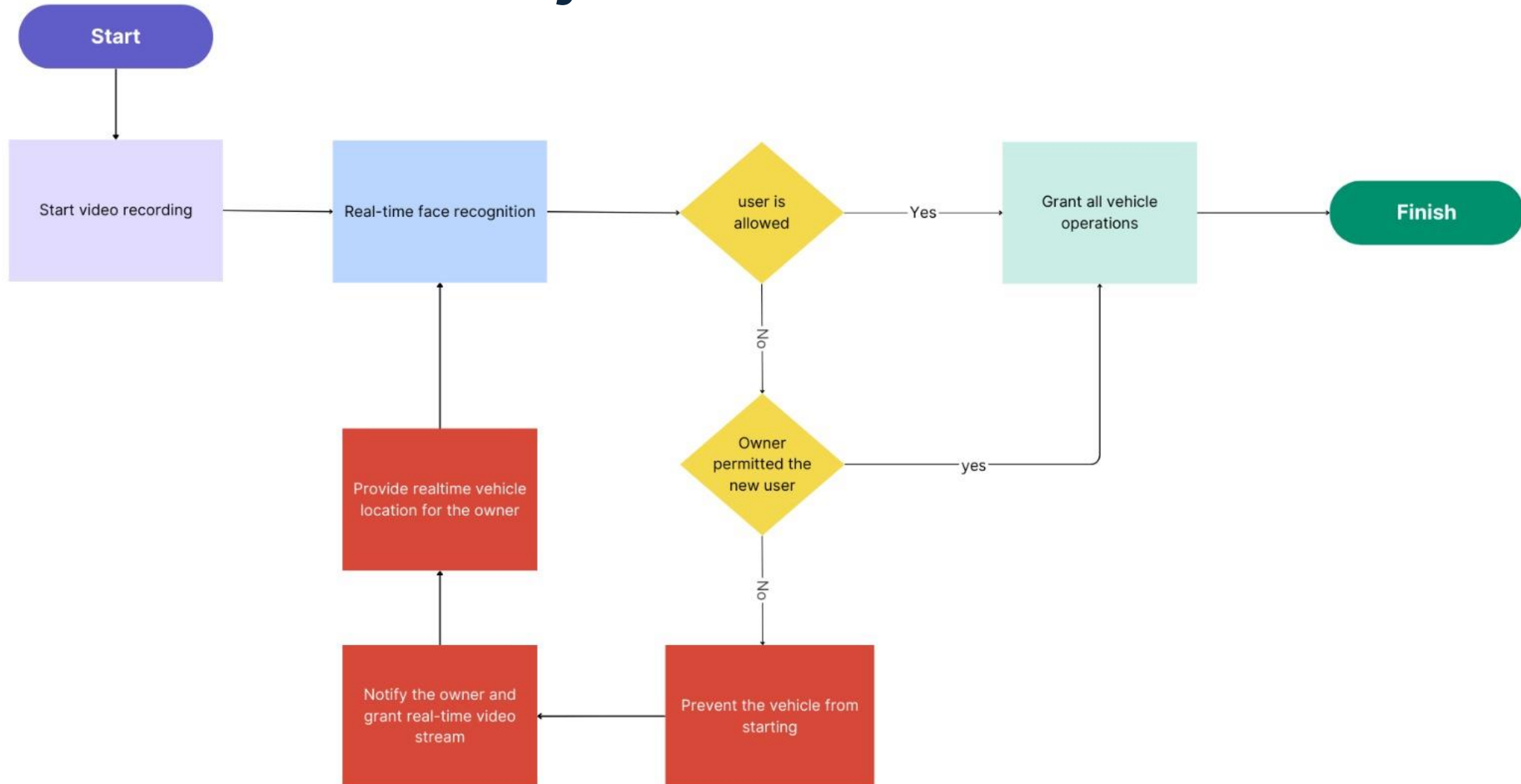
Our approach

- Using Machine learning to perform real-time face recognition of the current driver and notify the owner if the driver is someone that doesn't usually use the vehicle or not from the people allowed to use it.

- Provide further warning if the vehicle engine was started.

- Give the owner the ability to prevent starting the engine if needed.

Our approach

- Keep track of the vehicle location in realtime.

- Allowing the owner to record a realtime stream at any given time.

- Activate door locks if the vehicle supports this feature.

Demo of Project Code Flow-Chart

Thanks For Your Time