### PROBLEM SATATEMENTS

GROUP NO-6

**MEMBERS:** 

2007: MATKARI SIDDHARTH

2009: JONDHALE RAJESH

2022:JADHAV OMKAR

GUIDANCE BY- DR. MANI S

**Problem Statements:** 

- 1.ESP32 CAM Based Object Detection & Identification with OpenCV
- 2.IoT Temperature Based Fan Speed Control & Monitoring System
- 3. Disease Prediction Using Machine Learning
- 4.Blockchain-based Healthcare Records
- **5.Remote Plant Monitor**

# 1.ESP32 CAM BASED OBJECT DETECTION & IDENTIFICATION WITH OPENCV

ESP32 CAM Based Object Detection & Identification with OpenCV. OpenCV is an open-sourced image processing library that is very widely used not just in industry but also in the field of research and development.

## IOT TEMPERATURE BASED FAN SPEED CONTROL & MONITORING SYSTEM

In this project, we will make Temperature Based Fan Speed Control & Monitoring System using ESP8266 WiFi Module & observe the data on IoT App Blynk. The fan speed increases based on the increase in temperature. The Blynk App will show the current temperature & Fan speed in percentage. Using the Blynk, we can also set the threshold value at what temperature the fan should turn ON

#### DISEASE PREDICTION USING MACHINE LEARNING

The primary goal is to develop a prediction engine which will allow the users to check whether they have diabetes or heart disease sitting at home. The user need not visit the doctor unless he has diabetes or heart disease, for further treatment. The prediction engine requires a large dataset and efficient machine learning algorithms to predict the presence of the disease. Pre-processing the dataset to train the machine learning models, removing redundant, null, or invalid data for optimal performance of the prediction engine.

#### BLOCKCHAIN-BASED HEALTHCARE RECORDS

Traditional healthcare records management systems suffer from inefficiencies, security vulnerabilities, and privacy concerns. Fragmented data storage, lack of interoperability, and centralized control lead to delays, inaccuracies, privacy breaches, and compromised patient information

#### REMOTE PLANT MONITOR

Build a system that monitors the moisture levels in your plants and waters them accordingly. You can use sensors to detect the moisture levels and a pump to water the plants.

#### FINALIZED PROBLEM STATEMENT

### Disease Prediction Using Machine Learning

