Pragatheesh AP

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Education

College of Engineering, Guindy *Oct 2021 – Present*
B.E in Electronics and Communication Engineering

- GPA: 8.449 (Till 6th Sem)
- **Coursework:** Communication Networks, Microprocessors and Microcontrollers

John Dewey Matric Hr Sec School *Jun 2020 – May 2021*
Higher Secondary (XII) **- 96.67**

New John Dewey Matric School *Jun 2018 – Mar 2019*
Secondary (X) **- 94.6**

Projects

Lightweight Wearable Fall Detection System using Gait Analysis for Elderly *Jan 2025-Present*

- Developed a wearable fall detection system using ESP32, SIM900A, and MPU6050, leveraging Random Forest for gait analysis and real-time alerts.
- Hardware Used: ESP32, SIM900A GSM/GPS module, MPU6050 (IMU)

Smart Attendance System Using Machine Learning *Aug 2024-Dec 2024*

- Developed a Smart Attendance System using Machine Learning, integrating MTCNN and dlib for face detection and recognition. Automatically records classroom video and updates attendance in real-time, accessible via a web portal
- Modules Used: MTCNN, dlib, OpenCV, Pytorch

IoT based Rootzone Irrigation System using ESP8266 *June 2023-July 2023*

- Developed an IoT-based root zone irrigation system using ESP8266, incorporating DHT11, moisture, and rain sensors for data collection, with integration to ThingSpeak server for remote monitoring and control.
- Hardware Used: ESP8266, DHT11, Rain and Moisture Sensor

All Terrain Metal Detector Bot *Aug 2022-Nov 2022*

- Developed a Bot which has the capability to travel across various terrains and is equipped with Metal detection abilities.
- Hardware Used: ESP32, L298N Motor Driver

Skills

Problem Solving: Data Structures and Algorithms

Languages: Java, SQL, Python(Basic)

Hardware: Arduino, ESP8266, Raspberry Pi

Familiar With: OOPS, DBMS

Experience

The Centre for Internet of Things (CIoT), MIT, Anna University *June 2023-July 2023*

- Completed a four-week IoT internship at the Centre for Internet of Things (CIoT), Anna University, MIT Campus.
- Gained hands-on experience in IoT devices, sensors, actuators, Machine Learning, LoRa Technology, and MQTT, culminating in a soil moisture-based irrigation project.