VIGNESH P

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Profile

Innovative and goal-driven Electronics and Communication Engineering graduate with a strong foundation in software development and a keen interest in real-world technology applications. Eager to contribute to product engineering and embedded software projects, while growing in a dynamic environment that blends design, intelligence, and cross-domain innovation.

Education

Panimalar Engineering College — Chennai, India
Bachelor of Engineering, Electronics & Communication. **CGPA:8.2** — 2022-2026

Adhiparasakthi Matric Higher Secondary School — Melmaruvathur
HSC, Percentage: **80.16%** — 2022

Dr.Natarajan Matric Higher Secondary School — Vettankulam
SSLC, Percentage: **89.2%** — 2020

Experience

Anna university, Guindy- 5G WIRELESS COMMUNICATION — Chennai, India
Intern — Jun2024 - Jul2024

- Completed a 1-month internship at Anna University on 5G wireless communication, applying MATLAB and signal processing tools in hands-on lab sessions to reinforce theoretical concepts.
- Developed a machine learning model for classifying modulation schemes using 5G Toolkit, performed data preprocessing, feature selection, and model evaluation to enhance communication system design.

Projects

Motion Prediction model using Machine learning | Python, Machine learning, sensors

- Developed a motion prediction model using a Random Classifier algorithm in Python, leveraging scikit-learn and real-time sensor data.
- Utilized accelerometer-based input to accurately forecast movement patterns, demonstrating improved reliability over traditional logic-based methods.

Thermoelectric Generator | Ansys, MATLAB

- Designed a Thermoelectric Generator (TEG) system in **ANSYS Workbench** using the Steady-State Thermal and Electric Modules, simulating heat flow and voltage generation from vehicle exhaust gases.
- Modelled the thermal-electrical behaviour using coupled Multiphysics simulations and validated the output using **MATLAB Simulink** under dynamic automotive conditions.

Obstacle Avoiding Robot | Arduino, sensors

- Designed and developed an obstacle-avoiding robot using **Arduino UNO, ultrasonic sensors, and motor driver** modules to enable autonomous navigation.
- Programmed the microcontroller using embedded C to process real-time sensor data and make movement decisions based on object proximity.

Technical Skills

Languages: Java, C, SQL, HTML, CSS.
Database: MySQL
Developer tools: Git, GitHub, VS code, Eclipse

Certifications

- Introduction to Cloud Computing
- Machine Learning
- 5G Wireless Communication
- Cybersecurity Fundamentals