Prerit Jain

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EDUCATION

Vellore Institute of Technology (VIT), Vellore Oct 2020 - July 2024

B.Tech in Electronics and Communication Engineering *CGPA*: 7.85

SKILLS

Languages: C, Python fundamentals
Technologies: SQL, Figma
Miscellaneous: Multisim, Lt.Spice,Cadence virtuso ,MsOffice ,STMCubeIDE ,STMCubeMX ,ArduinoIDE

EXPERIENCE

STMicroelectronics Pvt Ltd. Greater Noida, India

Firmware developer Intern - Motor control using **BLE** and MCU May 2023–July 2023

- Designing a BLE joystick controller for the maneuverability of a rover, worked on boards like NUCLEO-L476RG, X- NUCLEO-BNRG2A1, STEVAL- IDB012V1
- transfer data through UART over Bluetooth Low Energy
- Advertising data and establishing connection between app and Bluetooth module
- Debugging and porting of the code firmware from one board to another
- Completed the project successfully within the time limit.
- Gained networking capabilities by interacting with various executives ranging from interns to managers.

PROJECTS

IOT based advanced digital locker

Developed and implemented a highly secure digital locker system using Arduino Mega, GSM module, and RFID tagging; enhanced data protection. An RFID tagging system works by transmitting and receiving information via an antenna and a microchip. There are basically three frequencies on which it can be operated, namely, low frequency (125-134 KHz), high frequency (13.56 MHz) & Ultra-High frequency (865-960 MHz). The microchip present on the tag can be programmed however the user wants.

rPPG Heart Rate detection using webcam

Noncontact imaging Photoplethysmography (PPG) is a noncontact imaging technique that can provide physiological assessment at various anatomical locations while causing no discomfort to the patient. Using different ML framework algorithms we have achieved accurate real time heart rate detection using the webcam of a laptop. The patient goes under Facial detection, skin segmentation, pre processing, rgb separation, band pass filteration to obtain a heart rate with a higher frame rate than compared to the base paper.

Arduino based disaster detection system

This project consists of multiple sensors like ADXL335 Accelerometer, flame, gas, temperature, humidity and a gsm module. All these sensors are kept in sync with the GSM module with the help of Arduino Uno board and it is programmed to provide alert messages to specific mobile numbers

CERTIFICATES

Coursera by IBM - Data Analytics	June 2022
Coursera by University of Virginia - Digital Product Management	June 2022
NPTEL by IIT Madras - Entrepreneurship	October 2022

ACHIEVEMENTS

- Lead guitarist in the music club , Actively performed in college fests. Performed in Riviera 2023 pro show for an audience of 20000 students. Actively involved in the music club Board as well.
- Runners up in Men's badminton VITPL