Ranit Pradhan

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ranit-pradhan

Education

2019-2023 **B.Tech in Electrical and Computer Engineering**, *Amrita Vishwa Vidyapeetham*, Kollam, Kerala, India
Ongoing *CGPA: 8.12/10*

2017-2019 **Higher Secondary**, *Belda Gangadhar Academy*, Paschim Medinipur, W.B., India
Percentage: 78.93%

Experience

December 2020 to Present **Member at Team bi0s**, *Amrita School of Engineering*
- Participated in various CTFs like Mitre, CSAW, Defcon etc.
- Currently working on Embedded Security and Linux systems.
- Mentoring first and second year student members.

Page link: `https://bi0s.in/hardware.html`

November 2019 to January 2021 **Member at IEEE, Kerala Section**, *Amrita School of Engineering*
- Participated in many Hackathons, Conferences, Webinars.
- Undergone a Machine Learning workshop sponsored by **Megara Robotics Pvt. Ltd**.

Certificate link: `https://raw.githubusercontent.com/RanitPradhan/Certificates/main/Certificate_Me.jpg`

Achievements

October 2021 **IEEE RFID-TA 2021 Challenge**, *Second Place*, Vaccine Verification using RFID-based secure authentication
The aim of the project was to use RFID technology in the fight against Covid-19 by verifying one is fully vaccinated with a good health or not, besides it we also tried to include contactless temperature verification.
Certificate Link: `https://raw.githubusercontent.com/RanitPradhan/Certificates/main/IEEE_RFID_2021.png`

Skills

Languages Python, C, C++, SQL
Core Embedded C, AVR, Networking, Robotics
WebD HTML,CSS,JS
VCS Git, Jupyter Notebook
Tools
- **Software** STM CubeMx, MPLAB, Arduino IDE, VS Code, MATLAB, LT Spice, Proteus, ARM-Keil, Eagle CAD
- **Hardware** Arduino UNO, ESP(8266,32), Tiva C, RaspberryPi-4, Logic Analyzer, Sensors.

Soft Skills Team management, Leadership, Mentorship

Projects

July 2020 **An Ultra-Portable Vis-NIR Spectrometer for Chemometric Applications**
On-site material inspection and quality analysis of food and agricultural produce, which require portable sensing systems. A mini spectrometer is used for the measurements and the spectra data is analyzed using machine learning.

September 2020 **COVID-19 Alert Distance**
This project is related to the recent pandemic situation of COVID-19. A replica model to alert human to keep safe distance from each other.

May 2021 **Staircase LED using PIC**
Simple staircase LED controlling using **PIC16F877a** microcontroller. Simulation platforms - MPLAB and Proteus are used.

November 2021 **Accident Alert in Mist**
STM32F103C4 microcontroller application for accident avoidance of vehicles in fog areas. Simulation platforms like Proteus, STMCubeMX, ARM-Keil are used.

April 2022 **Audio Management System**
Lightweight desktop music player application using python frameworks**(postgresql,asyncpg,pysimplegui,psycopg2)**.

Interests

Firmware, IoT, Embedded Systems, Robotics.