

Nojin K S

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github.com/nojinsebastian

PROFILE

I firmly believe in the principle of implementing my duties with dedication and determination. I am looking forward to good career growth opportunities, where my talent and knowledge could be best subjected and utilized for the benefit of the organization and myself.

Education

APJ Abdul Kalam Technological University, B-Tech in Electrical and Electronics Engineering 2020 – 2023

- GPA: 7.75/10
- **Coursework:** MATLAB/Simulink, Proteus, LTspice, KiCad, EAGLE, AutoCAD Electrical

State Board of Technical Education, Diploma in Electrical and Electronics Engineering 2016 – 2019

- GPA: 7.02/10
- **Coursework:** PLC programming, Circuit design, Embedded systems, Microcontrollers

Experience

Embedded Engineer, Verdant IT Solutions – Ernakulam, Kerala Sept 2023 – Present

- Designed and developed firmware for microcontrollers (AVR, ARM, ESP8266, ESP32) in C/C++
- Implemented real-time applications using interrupts, timers, and communication protocols (UART, I2C, SPI, CAN)
- Developed IoT solutions integrating sensors, actuators, and cloud platforms like AWS IoT, ThingSpeak, and Blynk
- Designed PCB layouts for embedded projects using KiCad and Altium Designer
- Experienced in debugging hardware and firmware using logic analyzers, oscilloscopes, and debuggers
- Conducted hands-on training and internships on embedded systems and IoT at multiple colleges
- Developed and implemented a compact inverter for small-scale applications, demonstrating proficiency in power electronics and embedded systems control

Intern, IPA India Private Limited – Bangalore July 2023 – Aug 2023

- Worked on the production and integration of load cells into systems such as crane weighing systems, weighbridges, and belt weigh feeders
- Gained hands-on experience in the manufacturing processes involved in creating weighing systems and load cell applications
- Developed proficiency in the calibration of various load cells to ensure high accuracy and reliability in real-world applications
- Contributed to integrating load cells with different electronic systems, enhancing the functionality and performance of weighing equipment

Projects

Quad-Zone IoT Induction Cooker github.com/respository

- Designed a smart induction cooker with four independently controlled coils for dynamic and efficient heating
- Tools Used: ATmega328P, Microchip Studio, ESP8266/ESP32, C, PWM, I2C

MPPT Battery Charging System with Advanced Buck Converter

github.com/respository

- Designed an MPPT battery charging system using a buck converter, optimizing duty cycle with the Perturb and Observe (PO) algorithm
- Tools Used: ATmega328P, C, PWM, ADC, I2C, PO Algorithm

Solar-Powered Hydropanel System

2023

- Developed a solar-powered hydropanel utilizing a Peltier module for water condensation and integrated a buck converter for efficient voltage regulation
- Tools Used: Peltier Module, Buck Converter, ATmega328P, Arduino IDE C, PWM, ADC

2.5 kVA Off-Grid Solar Installation

2019

- Designed and implemented a 2.5 kVA off-grid solar system, gaining hands-on experience in solar system design, charge controller configuration, and battery management
- Tools Used: Solar Panels, MPPT Charge Controller, Batteries, Inverter, Energy Monitoring System

Technologies

Languages : C++, C, Python

Protocols : UART, SPI, I2C, CAN, TCP/IP, MODBUS

Simulation Software Tools : Proteus, MATLAB, PSCAD, EAGLE CAD, Arduino IDE, Microchip Studio

Languages

- English
- Malayalam
- Tamil
- Hindi

Declaration

I hereby declare that the above-mentioned information is true and I bear the responsibility for the correctness of the above-mentioned particulars

Reference

Mr. Suresh Kumar Director

Verdant IT Solutions

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