

Dhruv Joshi

Driven electronics engineer with a track record of delivering impactful solutions in embedded systems, digital signal processing, and hardware-software integration.

✉ whodhruvjoshi@gmail.com

☎ 9058566066

📍 Chandigarh, India

🌐 dhruvjoshi137

🐙 DhruvJoshiElectronics

WORK EXPERIENCE

ZENERGIZE POWER TECH PVT LTD

Embedded Systems Engineer

September 2024 - Present

Type 2 Faceless AC Charger

- Developed an LLC-based communication controller for EV-EVSE interaction as per IEC 61851-1 (Annex A). Also Implemented 1 kHz PWM signaling for control pilot communication.
- Developed firmware for the Master Controller Unit on ESP32 enabling seamless communication with a BLE-based mobile application, OCPP communication controller, and energy meter. Integrated MQTT protocol for real-time monitoring of performance parameters.

120kW DC Fast Charger

- Designed and developed embedded software for a real-time Performance and fault monitoring system using ESP32, integrating BLE for mobile app-based fault monitoring and MQTT for central server connectivity to enable remote data logging and fault analysis in DC Fast Charger
- Developed CAN communication software for a 300 kW Power Converter Module, enabling seamless data exchange and periodic monitoring with the Master Control Unit..
- Developed 10 inch Human Machine Interface for DC Fast Charger using Nexiton HMI of Intelligent Series and interfacing with F2897D using UART.

ELECTROWAVES ELECTRONICS PVT LTD

Graduate Engineer Trainee

July 2024 - August 2024

4.5KW DSP Based Regulated cum Emergency Battery Charger unit

- Developed Calibration software for a 4.5kW Under-Slung RBC cum EBC for Indian Railways, implementing inter-processor communication on F28379D DSP, CAN-based communication between chargers, and fault data storage in AT24C512 EEPROM.
- Integrated DS1307 RTC with a 30-day ultra-capacitor backup and implemented a USB CH376S-based data logging solution, enabling the DSP to retrieve fault and battery health data via I2C and store 500 fault records on a pen drive for diagnostics and analysis.

EDUCATION

Panjab University , Chandigarh

Bachelor of Engineering (ECE) - 8.59

November 2020 - June 2024

SKILLS

Language - C, Verilog, Java

Standards - UART, I2C, CAN, USB, BLE

Software - CCS, Vivado, FreeRTOS, GDB, Linux, Proteus, Git

Hardware - TI F28379D, TI MSP430, ESP32, Atmel, FPGA Basys3

Spoken Language : English, Hindi

LANGUAGE

English Advanced

Hindi Advanced