

# Arunesh E

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## Profile Summary

Motivated EEE student with interest in Electric Vehicle systems, battery management, and power electronics. Skilled in web technologies, bridging embedded systems and software interfaces. Seeking internship opportunities to contribute and grow professionally.

## Skills

**Electrical & Electronics:** Power Electronics, DC-DC Converters, Electrical Machines & Drives

**Programming:** C, C++, Java, Python, MATLAB Script

**Tools:** Simulink, Arduino, Figma, React.JS, Github

**Soft Skills:** Adaptability, Leadership, Teamwork, Problem Solving.

## Projects

### Performance Analysis of High-Gain DC-DC Converter for EV Charging 2025

- Simulated high-gain DC-DC converter for EV battery charging in MATLAB-SIMULINK.
- Derived state-space model and validated converter performance under varied conditions.

### IoT-based Power Factor Monitoring and Correction System 2025

- Designed ESP32-based system for real-time power factor monitoring and automatic correction.
- Integrated IoT cloud platform for live data visualization and remote monitoring.

### Li-ion Battery SOC Estimation using Extended Kalman Filter (MATLAB) 2025

- Developed MATLAB simulation to estimate Li-ion battery SOC using EKF and Thevenin RC model.
- Achieved  $\pm 1\%$  SOC accuracy in first 3 hrs and robust performance against noisy input data.

### Motocred - Landing Page 2025

- Built a responsive landing page for a two-wheeler buying and reselling platform.
- Included hero section, About Us & an enquiry form using frontend technologies.

## Education

### SASTRA Deemed University 2022 – 2026

B.Tech Electrical & Electronics Engineering (Smart Grid & EV) 5.73 CGPA

### Senior School Certificate (HSC) 2022

Blossom Public School - CBSE 78.8%

### Secondary School (SSE) 2020

Blossom Public School - CBSE 85.8%

## Professional Experience

### Internship – Testing & Commissioning of Electrical Equipment Dec. 2024 – Jan. 2025

Larsen & Toubro Construction Chennai

- Assisted in on-site testing and commissioning of substations, transformers, and diesel generators.
- Ensured compliance with EHS protocols and safety standards during project execution.

## Certifications

### Semiconductor Characterization Oct. 2023 – Dec. 2023

Ministry of Heavy Industry, Govt. of India SASTRA Deemed University

- Completed practical training on semiconductor characterization and device testing.