VAIBHAV SENGAR
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Objective

As an aspiring Electrical Engineer with hands-on experience in electrical systems and expertise in MATLAB simulations, I am eager to contribute to innovative projects that enhance the efficiency and sustainability of electrical systems. I seek to leverage my technical skills and problem-solving abilities to drive energy-efficient solutions and support the company's commitment to advancing modern electrical technologies.

Education

B.Tech, Electrical Engineering
Yeshwantrao Chavhan College of Engineering, Nagpur
Graduation: 2024

HSC
St. Paul Junior College, Nagpur
Year: 2020

SSC
Atulesh Convent, Nagpur
Year: 2018

Experience

Trainee, Electrical Engineering Department
SAIL, Bhilai Steel Plant, Bhilai chhattissgarh
February 2024 – April 2024

- Assisted senior engineers in troubleshooting ,Resolving and repairing of welding transformer.
- Conducted research on analysis of Causes and Failures of Rectifiers Based Welding Transformer, resulting in a detailed report that was presented to senior management.
- Participated in site inspections, evaluating safety measures and ensuring adherence to industry standards.

Projects

Investigations on Charging Methods for Electric Vehicles: Focused on Onboard Battery Charging and DC-DC Converter Efficiency
Developed a novel approach for onboard battery charging systems for EVs, integrating DC-DC converter technology to enhance system efficiency and reduce energy losses.
Conducted in-depth simulations and analysis of DC-DC converters and inverter systems, focusing on optimizing charging methods and enhancing overall system performance.
Ensured compliance with industry standards in system design and testing, maintaining detailed documentation of design specifications and test results.
Implemented testing procedures to assess the robustness of charging systems, with a focus on maintaining stable power flow and minimizing voltage ripple.
Analyzed the performance of power electronic components like inverters and converters in EV charging applications, aligning with industry practices in HEV/EV systems.

- Conducted a comprehensive literature review on EV charging techniques, forming the foundation for project development.
- Led the design and analysis of an advanced Power Electronics (PE) converter to enhance charging efficiency.
- Simulated charging systems in MATLAB, focusing on off-board and on-board chargers, achieving maximum efficiency.
- Designed a DC fast charger schematic, optimizing for scalability and multiple charging scenarios.

Certifications

- **Solar Roof Top Installation.**
- **Testing and Maintenance Of Electrical Equipments.**

Skills

Technical Skills: MATLAB Simulink, Visio ,power system ,Testing and Maintenance, Troubleshooting ,Circuit Design.
Soft Skills: Leadership, Time Management, Problem Solving, Adaptability

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Extracurricular Activities

- Core Member, Robotics Club, YCCE (2022-2023)
- Co-Head of Publicity, Electricaa Fest (2022)
- Member of PRAYAAS Social club (2022-2023)
- Winner, Zonal IIT Bombay Line Follower Competition (2022)

Languages

English, Marathi, Hindi
