

Sarvasiddi Nagabhushanam

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ABOUT

Experienced Electrical System Engineer at Xstrad Corp with a strong background in EV software and hardware. Demonstrated expertise in designing vehicle architecture, fault debugging, and system integration to ensure reliable performance. Proficient in utilizing MATLAB and Simulink for EV modeling and optimization. Skilled in powertrain sizing and collaborating with cross-functional teams to ensure seamless component placement and maximize system efficiency

PROFESSIONAL EXPERIENCE

Xstrad Corp | Electrical System Engineer | Aug 2024 - Current

- Designed and developed EV architecture for two-wheelers, including powertrain sizing and wiring harness layout following ISO 26262 (Functional Safety) standards.
- Collaborated on 4 kWh battery pack design for high-speed vehicles, ensuring compliance and selecting a suitable BMS for safety and efficiency.
- Selected VCU and HMI architecture aligned with AUTOSAR standards for high-speed vehicle applications.
- Simulated powertrain components using MATLAB/Simulink for performance validation and optimization.
- Conducted range and performance testing via CAN communication (ISO 11898) and performed fault diagnostics to resolve system issues.
- Coordinated with mechanical teams for optimal component placement, ensuring EMC/EMI compliance

ISIEINDIA Private Limited | Electric vehicle Trainee | 8 Months

- Designed and simulated EV components using MATLAB and Simulink to evaluate performance.
 - Conducted powertrain sizing and optimization for EV components to meet performance goals.
 - Developed and delivered technical EV courses, including BMS design with MATLAB and Simulink.
 - Produced video lectures and conducted interactive webinars to enhance learning outcomes.
 - Supported EV course sales by leveraging technical expertise to design market-relevant content.
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SKILLS

- MATLAB & SIMULINK
- Vehicle Architecture and Integration

- Wiring Harness for 2 wheeler
 - BMS Hardware development
 - Battery Pack Design
 - ki-cad
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PROJECTS

Design and Fabrication of High Speed Electric Two-Wheeler

- Conducted end-to-end design and fabrication of an electric two-wheeler, focusing on structural integrity, battery placement, and component layout.
- Engineered and assembled electrical systems, including battery management, motor, and controller integration.
- Optimized powertrain configuration for improved energy efficiency. Employed testing methods to ensure safety and reliable functionality under varied operational conditions.
- Designing the Vehicle Architecture and Low Voltage wiring and High Voltage Wiring.
- Conduct fault analysis via CAN Protocol and resolve system issue

Simulation and Optimization of Electric Vehicle Powertrain in MATLAB/Simulink

- Developed a detailed powertrain model using MATLAB/Simulink to simulate and optimize EV performance.
 - Utilized simulations to analyze motor torque, battery state of charge, and energy consumption.
 - Implemented control strategies to balance power demand, enhancing efficiency and regenerative braking.
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EDUCATION

- **Bachelor of Technology** - Electrical and Electronics Engineering | Vishnu Institute of Technology | 2021-2024 | CGPA: 8.7/10
 - **Diploma** - Electrical and Electronics Engineering | Rajiv Gandhi Recs Polytechnic | 2018-2021 | 90.7%
 - **SSC** | Prasanthi Niketan School | 2017-2018 | 95%
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CERTIFICATIONS

- Build An Electric Vehicle certification from Udemy
- MATLAB, Simulink, and Stateflow from MathWorks
- Introduction to Motor Control System from MathWorks
- Mastering in BMS design from Udemy