

Sanket R Iyer

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Leadership & Projects

OCV–SOC Modelling for Battery SOC Estimation — [Project](#)

- Modelled MATLAB-based Li-ion battery SOC estimation via OCV-SOC curves and dynamic load testing.

Grid-Connected PV and EV Charging System Simulation — [Project](#)

- Built a MATLAB solar-EV grid simulation to optimize network stability and smart charging strategies.

Predictive Maintenance of Machine Health by S-NODE Using AR — [Publication](#)

- Published research on AR-driven predictive maintenance in MATLAB for real-time Industry 4.0 machine health monitoring.

IEEE Multimedia Signal Processing Cup — [Award](#)

- Developed an award-winning IEEE speech recognition ML model with top-ranked performance in signal processing.

GLOCAL Foundation of Canada — Data Track Volunteer (Volunteering)

- Engineered data analytics and visualization workflows for civic engagement projects to drive research and stakeholder reporting.

Experience

Dotcom IoT LLP — AI/ML Research Intern

Feb 2023 - May 2023

- Developed a predictive maintenance prototype in Python to detect machine-health anomalies, improving fault detection accuracy by 15% using machine learning feature engineering.
- Optimized model training and validation workflows to cut experiment cycle time by 20% through automated data preprocessing and evaluation scripts.
- Collaborated with a 4-person multidisciplinary team to reduce maintenance-related downtime by 10% by translating reliability requirements into measurable model outputs.
- Authored 6 technical reports and stakeholder-ready documentation to accelerate approvals by 25% through clear experiment logs, results summaries, and recommendations.

Sigma Automation — Electrical Engineer Intern

Jun 2022 - Jul 2022

- Drafted 25 electrical design deliverables including single-line diagrams, wiring diagrams, and control panel layouts, reducing drawing rework by 15% using AutoCAD Electrical standards.
- Compiled 5 cable schedules and 3 bills of materials to improve procurement accuracy by 10% through detailed equipment layouts and documentation control.
- Executed testing and commissioning support for 12 devices including motors, relays, and sensors, improving first-pass verification to 95% by checking compliance to specifications.
- Coordinated with engineers and technicians to resolve 8 field issues and maintain 100% schedule adherence by tracking action items and updating documentation.

Certifications

AWS Certified AI Practitioner — [Credential](#)

- Validated foundational knowledge of AI, machine learning, generative AI, responsible AI, and AWS AI/ML services for real-world business and technical applications.

Education

University of Windsor, Ontario, Canada - Master of Engineering in Electrical & Computer Engineering

Gujarat Technological University, India - Bachelor of Engineering in Electronics & Communication Engineering

Concentrations: Power Systems Engineering, Electrical Protection & Automation, Electrical Design & Control Systems

Courses: Power Systems Analysis, Protection & Control Systems, Embedded Systems, MATLAB & Electrical System Simulation, , Embedded & Intelligent Systems

Skills

Software Skills: CYME, AutoCAD Electrical, MATLAB, Simulink, Python, Pandas, NumPy, Microsoft Office Suite, PLC, SCADA, SQL, Power BI, Tableau, ETAP, REVIT

Technical Skills: Electrical Design, Power Systems Analysis, Protection & Coordination, Short-Circuit Analysis, Relay Coordination, Industrial Automation, Power Distribution Systems, Battery Management Systems (BMS), Predictive Maintenance, Machine Learning

Soft Skills: Problem Solving, Analytical Thinking, Communication, Cross-Functional Collaboration, Technical Documentation, Attention to Detail, Critical Thinking, Time Management, Project Coordination, Adaptability