

DEVADATHAN J NAIR

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EDUCATION

Mar Baselios College of Engineering and Technology (Autonomous)
Bachelor of Technology – Electrical & Electronics Engineering | CGPA: **8.40 / 10.00**

Thiruvananthapuram, India
Oct 2021 – Aug 2025

SKILLS SUMMARY

Electrical Engineering: System Requirements Analysis, Power Systems & Control Systems, DC-DC Converters, Electrical System Architecture, Schematic Reading, Load Calculations, Hardware Testing & Measurements, Prototyping

Simulation & Modeling: MATLAB/Simulink (Real-Time Simulation, Modeling, Control Design), Mathematical Modeling, Systems Analysis

Programming: Python (Pandas, NumPy, Regression Modeling), C Programming

Industrial Automation: PLC Basics, SCADA, Sensors & Transmitters, Control Loops, Process Measurement, Industrial Communication Protocols

Tools: MATLAB/Simulink, MS Office Suite, Technical Report Writing

Soft Skills: Analytical Thinking, Attention to Detail, Problem Solving, Technical Documentation, Cross-functional Collaboration, Mentoring, Quick Learner, Self-motivated

WORK EXPERIENCE

Kerala State Electricity Regulatory Commission (KSERC)
Electrical Engineering Intern

Thiruvananthapuram, India
May 2026 – Present

- Assisting in identifying, organizing, and evaluating engineering requirements and approaches for electrical distribution systems, ensuring alignment with commission standards and compliance frameworks.
- Analyzing power-system data and producing mathematical models and engineering reports to support regulatory decisions on grid performance, renewable integration, and power-system efficiency.
- Participating in technical reviews of electrical engineering requirements, specifications, and system designs; contributing to design standards documentation and process improvement workflows.
- Creating and maintaining technical product and process documentation; developing stakeholder presentations and reports that communicate findings in a clear and cost-effective manner.
- Evaluating novel technical concepts in smart-grid and distributed energy systems; adopting new engineering practices to develop innovative and low-cost solutions in the power sector.

Southern Railway
Electrical Engineering Intern

Thiruvananthapuram, India
October 2023

- Assisted in identifying, organizing, and inspecting requirements for power-distribution equipment and protection systems across 25 kV AC electrified networks, improving understanding of real-time electrical architecture and fault response.
- Analyzed electrical schematics and PLC/SCADA signal control workflows to study system behavior, document results, and support corrective actions and troubleshooting.
- Conducted technical reviews of system designs and protection logic; authored technical documentation and developed presentations communicating findings to engineering teams.
- Collaborated within a multi-cultural team, demonstrating strong communication, negotiation, and interpersonal skills for effective project delivery.

PROJECTS

Design and Implementation of a Dual Active Bridge Converter for Interconnected Microgrids
September 2024 – March 2025

- Designed and modeled a bidirectional DC-DC converter (Dual Active Bridge) in MATLAB/Simulink; applied real-time simulation and control strategies, demonstrating skills in electrical system architecture and modeling.
- Developed and validated open-loop and closed-loop control strategies to improve power-flow control accuracy and dynamic response time; produced analyses and mathematical models with documented design conclusions.

- Achieved microgrid efficiency benchmarks exceeding 90% through MATLAB-based voltage and current regulation models, aligned with PV-based distributed energy system requirements.
- Built hardware prototype based on simulation outcomes; validated component selection and control logic through technical literature review, ensuring practical scalability for larger energy-management systems.
- Authored technical reports and presented findings; conducted technical reviews of design specifications and contributed to documentation standards for the project.

CERTIFICATIONS

Data Science in Python: Regression and Forecasting

- Gained hands-on experience with Python-based regression modeling, load prediction, and time-series forecasting; implemented linear and logistic regression and evaluated model performance using Pandas and NumPy.
- Demonstrated aptitude for computational problem-solving and data-driven approaches applicable to electrical system optimization and AI/ML integration.

ACHIEVEMENTS & LEADERSHIP

- Design Lead – IEEE Student Branch, MBCET: Led design initiatives and mentored junior members; coordinated technical projects and presentations.
- Best Volunteer Award 2025 – IEEE SB MBCET: Recognized for outstanding contributions to technical and community activities.
- Design Lead – FRAMES MBCET: Directed creative and technical design projects for the college media team.