KOUNDINYA VINNAKOTA

Ph: +1 240 704 3580 | Email: koundinya.vinnakota@gmail.com | linkedin.com/in/koundinyav
github.com/koundinyavinnakota

SUMMARY

Results-driven Applications Engineer and former R&D Systems Test Engineer with a strong foundation in electrical distribution systems, EVSE technologies, and automation solutions. Proven expertise in pre-sales engineering, system-level validation, and product integration for power infrastructure and control products. Experienced in interoperability testing, OCPP backend integration, UL compliance, and PLC-based automation. Adept at setting up test labs, developing comprehensive test plans, and building automated validation frameworks to ensure performance, safety, and regulatory adherence. Skilled in cross-functional collaboration with hardware, firmware, cloud, and product teams to influence roadmaps, troubleshoot complex issues, and drive customer success. Passionate about engineering precision, test coverage optimization, and accelerating time-to-market through robust technical practices and customer-focused solutions.

TECHNICAL SKILLS

Engineering & CAD Tools: AutoCAD, Siemens NX, SolidWorks, PTC Creo, Fusion 360, Ansys Workbench, Ansys Fluent
Programming & Scripting: C++, Python, Core Java, C, MATLAB, Bash, PERL, TCL
Industrial & Testing Tools: PLC Programming, LabVIEW, Test Stand, SAP, Siemens TeamCenter, Engineering Base Software
Machine Learning & Simulation: OpenCV, TensorFlow, Keras, PyTorch, SciKit-Learn, Gazebo, Rviz
Embedded & Software Development: ROS1, ROS2, CMake, GIT, Docker, Agile, Gtest, GMock, GCov
Domain Expertise: Power Distribution Equipment, Industrial Control Panels, Electrical Protection & Automation Systems, Embedded Systems, Motion Planning, Sensor Fusion, Project Management

WORK EXPERIENCE

Siemens – Components Application Engineer Peachtree Corner, GA | Sep 2025 – Present
Currently serve as the Pre-Sales Subject Matter Expert (SME) for Circuit Protection & Controls (CP&C), translating customer requirements into tailored applications that accelerate product adoption and system performance.

- Collaborate with R&D, Product Management, and Sales teams to influence product roadmaps, ensure safety compliance, and align development efforts with evolving market needs.
- Provide remote and on-site technical support, including troubleshooting field installations, analyzing returned products, and resolving complex system issues to enhance reliability and customer satisfaction.
- Author technical documentation, white papers, and application guides to enable seamless system integration and improve customer implementation success rates.
- Drive digital engagement through technical content creation, live demos, and active participation in trade shows to expand Siemens' market presence and strengthen product visibility.
- Design and deliver structured training programs for internal teams and external customers, building product expertise and reducing support turnaround times.
- Contribute to industry standards committees, shaping global technical requirements and ensuring Siemens' control products meet and influence international standards.
- Leverage PLC programming (TIA Portal), C programming, and industrial communication protocols (Modbus, Profinet, Profibus, Ethernet/IP) to enable advanced automation and controls integration.ss
- Utilize KPI-driven insights to monitor field performance, identify trends, and inform iterative product improvements.

R&D System Test Engineer Peachtree Corner, GA | Sep 2023 – Sep 2025

- Led system testing and product validation for SiCharge UC UL, covering system development, product care, and software integration.
- Headed interoperability testing and OCPP backend integration efforts to ensure compatibility with EV service providers and cloud-based platforms.
- Executed UL type testing for SiCharge UC UL products, aligning with regulatory and safety standards.
- Developed and implemented test plans for accessories used in SiCharge UC UL, contributing to complete product validation
- Set up the Test Lab from the ground up, overseeing equipment setup, infrastructure, and integration readiness.
- Built automated testing frameworks and lab environments to improve testing throughput and reduce manual validation cycles.
- Collaborated across hardware, firmware, and cloud teams to troubleshoot system-level issues and verify multi-backend product support.
- Supported system testing for additional EVSE and power distribution products, expanding test coverage across Siemens' portfolio

Magna Electronics – System Engineer Auburn Hills, MI | May 2023 – Sep 2023
Conducted comprehensive system and performance testing for Advanced Driver Assistance Systems (ADAS), focusing on features such as Blind Spot Monitoring and Lane-Keeping Assistance.

- Designed and implemented test architectures to validate ADAS functionality under real-world and simulated conditions, including sensor calibration and detection accuracy.

EDUCATION & CERTIFICATIONS

University of Maryland, College Park, MD | M. Eng, Robotics

- Robot Modeling, Control Systems, Autonomous Robotics, Machine Learning, Software Development for Robotics.

Jawaharlal Nehru Tech University, India | B. Tech in Mechanical Engineering