

Sarvesh R Karakannavar

Bangalore, India | +91-9880401327 | sarveshrk225@gmail.com | LinkedIn | Portfolio

Career Objective

Electronics and Communication Engineering graduate with industry experience at ABB Measurement & Analytics, seeking a role in networking, embedded systems, or IoT. Skilled in C, C++, Python, and hardware–software integration, with a track record of delivering simulation-based networking projects and real-world instrumentation workflows. Looking to build on this foundation in a technically demanding engineering environment.

Education

KLE Technological University <i>Bachelor of Engineering – Electronics and Communication</i>	Hubballi, Karnataka
K.L.E Society's C.I. Munavalli Polytechnic <i>Diploma – Electronics and Communication</i>	Hubballi, Karnataka
Lions English Medium School <i>SSLC</i>	Hubballi, Karnataka

Experience

Sales Support Engineer – Bangalore, India <i>AIDEAS Engineering Pvt Ltd</i> <i>PAMA Common Operations Team (COT) – ABB Measurement & Analytics Division</i>	Oct 2025 – Mar 2026
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- Supported global quotation workflows for ABB Measurement & Analytics product lines across multiple regions.
- Prepared technical and commercial proposals using Salesforce CRM and proprietary ABB configuration tools.
- Selected appropriate instruments across Pressure, Flow, Level, Temperature, and Analytical sensor categories based on customer specifications.
- Coordinated with internal technical teams and ABB product specialists to resolve application-specific queries and clarify scope for complex orders.
- Maintained proposal documentation and tracked order status updates within Salesforce, ensuring data accuracy across active quotation pipelines.

Projects

Real-Time Network Intrusion Detection System	<i>Python, Scikit-learn, Machine Learning</i>
<ul style="list-style-type: none">Built an ML-based IDS that continuously monitors network traffic and classifies potential threats in real time.Trained and evaluated multiple classification algorithms on the NSL-KDD dataset, selecting the best-performing model based on detection accuracy and false positive rate.Designed the pipeline to handle live packet capture, feature extraction, and classification with minimal processing latency.Research outcomes published at the <i>International Conference on Trends in Computing Systems (ICTCS 2024)</i>.	
Portable Soil Testing System for Sustainable Agriculture	<i>Embedded C, Microcontrollers, Sensors</i>
<ul style="list-style-type: none">Developed an embedded hardware-software system for on-site soil analysis using electrochemical sensors.System outputs crop recommendations based on soil parameters, including pH, moisture, and nutrient content.Designed the circuit for low power consumption to support field deployment without reliance on a continuous power supply.Implemented a decision logic module that maps sensor readings to a curated crop database, improving farmer decision-making at the point of testing.	
AODV Routing Protocol Implementation for MANETs	<i>C++, Network Simulation</i>
<ul style="list-style-type: none">Implemented the Ad hoc On-Demand Distance Vector (AODV) routing protocol for mobile ad hoc networks.Achieved efficient dynamic route discovery and maintenance with minimal control message overhead; supported both unicast and multicast traffic.Analysed route convergence time and packet delivery ratio metrics to validate implementation correctness against the RFC 3561 specification.	
V2X Communication for Vehicular Safety	<i>OMNET++, SUMO, VEINS, DSRC, UDP</i>
<ul style="list-style-type: none">Designed a V2X simulation environment using OMNET++, SUMO, and VEINS for real-time accident detection and adaptive traffic management.Implemented DSRC and UDP communication layers to minimise latency in safety-critical message exchange.Modelled vehicle mobility scenarios with varying traffic densities to evaluate system reliability under congested network conditions.Measured end-to-end message delivery latency and packet loss rate across simulation runs, validating performance against V2X safety communication standards.	

Multimodal Personal Assistant Bot (Internship Project)

Python, APIs, Raspberry Pi, Nvidia Jetson

- Built a voice-controlled assistant supporting image/video capture, real-time weather and news retrieval, email dispatch, home automation, and self-navigation.
- Integrated camera, microphone, speaker, and environmental sensors with a Python backend using third-party APIs.
- Designed a modular software architecture enabling independent testing and extension of each feature component without system-wide changes.
- Implemented wake-word detection for hands-free activation, reducing response latency through optimised audio buffer management.

Technical Skills

Languages	C, C++ (OOP), Python, HTML, and CSS
Networking	TCP/UDP, DHCP, IPV4/6, DSRC, UDP, protocols
Simulation Tools	OMNET++, SUMO, VEINS
Developer Tools	VS Code, Google Colab, Git & GitHub, Microsoft Office
Domain Knowledge	Embedded Systems, IoT, Network Configuration, ABB Measurement & Analytics, Salesforce CRM
Languages Spoken	English, Hindi, Kannada

Certifications & Achievements

- **JNCIA-Junos** – Juniper Networks Open Learning (Associate-level networking certification)
- **Networking Infrastructure Certification** – ABB
- **Google IT Support Professional Certificate** – Google / Coursera
- **Introduction to Git and GitHub** – Coursera
- **Machine Learning** – Great Learning
- **Research Publication** – *Real-Time Network Intrusion Detection System Using Machine Learning*, ICTCS 2024