SHOAIB YUSUF H

Software Engineer — Electrical Engineer

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📍 Coimbatore, Tamil Nadu, India

PROFESSIONAL SUMMARY

Software Engineer with 2+ years of expertise in building scalable solutions for Telecom, EV Charging, and IoT domains. Proficient in Go programming, microservices architecture, OCPP and AAA protocols, and 3GPP standards. Strong background in electrical engineering with hands-on experience in embedded systems and automation.

TECHNICAL SKILLS

Programming & Web Technologies

- Go (Golang)
- WebSocket, GraphQL, Webhook, gRPC
- MongoDB
- Python, JavaScript, HTML, CSS

Telecom & Protocols

- 3GPP Standards
- AAA Protocols (RADIUS, Diameter, NChF)
- Telecom BSS Systems
- Subscription & Usage Management
- Customer & Pricing Management

EV & Charging Systems

- OCPP 1.6 & 2.0.1 Compliance
- CSMS (Charging Station Management)
- EV Box Integration (RIOD, BOLT - OCPP 1.6)

DevOps & Tools

- Docker, Kubernetes, MicroK8s
- API Testing (Postman, Swagger)
- Grafana, Performance Testing
- ArgoCD, GitHub Actions, CI/CD

Payment Integration

- Payment Gateway SDKs (Stripe, Razorpay)
- Subscription Billing Systems

Architecture & Testing

- Microservices Architecture
- API Development & Gateways
- Apache Kafka (Event Streaming)
- BDD (Cucumber), Cypress

Electrical Engineering

- Power Electronics
- Electrical machines & Microcontrollers

PROFESSIONAL EXPERIENCE

Software Engineer

BlueoceanDigital India Private Limited

July 2023 - Present (2+ years) — Tamil Nadu, India

Telecom

- Architected and integrated AAA protocols using Go (RADIUS, Diameter, NChF) for telecom systems
- Designed and developed PCRF, Diameter Gateway, and integrated OCS for real-time policy and charging control
- Performed extensive testing using Seagull for validating Diameter Gateway scenarios
- Built a lightweight Diameter client simulator to reduce dependency on Seagull and accelerate testing workflows
- Improved throughput of Diameter Gateway by leveraging Go channels for concurrent CCR/CCA message processing
- Implemented Nchf and RADIUS gateways to handle telecom network requests and integrate with OCS systems

EV

- Implemented OCPP 1.6 & 2.0.1 compliant EV charging solutions
- Designed and implemented a microservice-based CSMS backend to manage station interactions via WebSocket
- Built a WebSocket-based EV station simulator to test and validate CSMS connectivity

Usage Management Platform

- Built secure subscription, pricing workflows for charging and usage services
- Designed and integrated payment systems using Webhooks with Stripe and Razorpay SDKs
- Built robust API gateways and REST APIs with Postman testing
- Built an LLM-based assistant in Python, integrated with OCS for intelligent pricing operations support
- Deployed applications using Docker, Kubernetes, and MicroK8s
- Implemented performance monitoring with Grafana

Automation Testing

- Applied BDD methodologies using Cucumber and Cypress automation

Software Engineer Internship

BlueoceanDigital India Private Limited

December 2022 - June 2023 (7 months)

- Developed REST APIs and integrated MongoDB for subscription management
- Gained expertise in OCPP protocol implementation using Go
- Contributed to IUT session management development and implemented key fixes to ensure stable test execution
- Contributed to core usage and subscription modules across Telecom, EV, and IoT domains
- Contributed to software architectural design with Swagger documentation
- Implemented BDD testing frameworks and comprehensive API testing
- Performed unit testing in Golang to validate core feature functionality and maintain code quality

EDUCATION

Bachelor of Engineering

Sri Ramakrishna Engineering College

Coimbatore, Tamil Nadu, India
Electrical and Electronics Engineering
July 2019 - May 2023 — CGPA: 8.22/10

- Pursued a Bachelor's degree in Electrical and Electronics Engineering through a comprehensive, eight-semester curriculum
- Gained practical experience through laboratory sessions, academic projects, and self-directed learning
- Actively participated in extracurricular activities and held leadership roles as Student Placement Coordinator and Department Representative
- Graduated with First Class, achieving a CGPA of 8.22/10

Higher Secondary Education

Lisieux Matriculation Higher Secondary School

Coimbatore, Tamil Nadu, India
12th Grade *(2017 - 2019) — Major: Computer Science and Mathematics — Grade: 72.2%*
10th Grade *(2016 - 2017) — Grade: 90.4%*

AWARDS

Department Representative

- Awarded for serving as Department Representative, strengthening student-faculty engagement and coordinating placement activities in the EE department.

Alumni Interaction Program Speaker

- Awarded for serving as a Speaker in the Alumni Interaction Program, representing the student body and sharing academic and professional experiences

CERTIFICATIONS

- Golang (Programming Language)
- MongoDB
- Docker and Kubernetes
- Working with WebSockets (Golang)
- Cypress Automation
- Electric Power Systems
- IELTS TRF
- GRE

LANGUAGES

- English (Proficient)
- Tamil
- Deutsch (Learner)

RESEARCH PUBLICATION

Uniform SOC Maintenance for 4WD Electric Vehicles

Published as a book chapter in the proceedings of the 2024 International Conference on Intelligent and Smart Computing in Data Analytics (Springer Nature).

This research presents a novel approach for maintaining uniform State of Charge (SOC) across a 4-wheel-drive electric vehicle's battery system, with emphasis on SOC balancing and energy efficiency.

Affiliated Institution: Sri Ramakrishna Engineering College

☍ **View Publication**

ACADEMIC PROJECTS

Uniform SOC Maintenance for 4WD Electric Vehicles

December 2022 - May 2023

- Developed power management system for SOC balancing in battery packs
- Implemented Carrier-Based PWM modulation for dynamic power flow
- Designed dual Voltage Source Inverter (VSI) system

Gas Leakage Detection and Alert System

January 2022 - May 2022

- Engineered IoT-enabled safety system for gas detection
- Integrated MQ-2 sensor with NodeMCU (ESP8266)
- Automated safety features with SMS alerts

Pesticide Spraying Robot

January 2021 - May 2021

- Developed autonomous robotic system for agriculture
- Integrated sensors with Arduino Uno microcontroller
- Automated navigation and obstacle avoidance