Daniel Surizon

Embedded Software Developer

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Skills

- Embedded C programming on Linux.
- MQTT.
- Protobuf and REST API.
- Python.
- RAG applications with Langchain, HuggingFace, and Ollama.
- Jira and Git.
- Problem solving.

Experience

SolarEdge Technologies / Software Engineer
2021 - Present

- Designing and developing features from scratch, involving detailed requirement analysis.
- MQTT and Threading: Resolved parallel threading issues using mutexes, IPC with MQTT (paho.mqtt).
- Worked with Protobuf over REST API for server communication.
- Led projects to renew certification for the Australian market by addressing communication time issues, and collaborating with certification labs.
- Enhanced telemetry performance by 53% by optimizing communication, leading to efficient data handling.
- Applied deep and broad code and system understanding to debug and fix legacy code, utilizing code traces and thorough investigation of weak points.
- Developing an internal RAG application using Langchain and Ollama for local operation, aimed at summarizing planning documents and Confluence pages to optimize efficiency.
- Managed integration with future clients, providing assistance and troubleshooting with the support team.

KANDO Clear Upstream / Embedded Software Engineer
2019 - 2021

- Developed and maintained code for wastewater management systems.
- External sensors integration and writing sensors drivers.
- Implemented infrastructure improvements.
- Represented KANDO as the first-place winner in SEAGATE Innovator of the Year.
- Developed the 'City-level SARS-CoV-2 sewage surveillance' system, Covid-19 sewage trakking.

RB-SYSTEMS / Embedded Software Engineer
2018 - 2019

- Driving aids for disabled drivers, interfacing with vehicle communication systems (CAN-BUS, LIN-BUS).
- Utilized SPI & UART on Microchip CPUs with MPLAB X for system development.
- Reverse engineer the car data and communication using a physical sniffer.

Education

Ruppin Academic Center / B.Sc. Electrical and Electronics Engineering
2015 - 2019

- Developed a spectrophotometric otoscope for diagnosing ear infections using spectroscopy techniques.
- Applied machine learning and data analysis in Python and MATLAB to enhance diagnostic accuracy.
- Implemented Principal Component Analysis (PCA) for data reduction and visualization.

Awards

Contributing to the establishment of Corona field hospitals in Angola, Africa. (LinkedIn link)