Rico

Principal Engineer | Embedded Linux & IoT Applications

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Professional Summary

Embedded and IoT engineer with 9 years of experience in embedded Linux applications, connected-device firmware, and cloud integration. Develops application-layer services in C/C++, Python, and Go, with expertise in AWS IoT, BLE connectivity, and video streaming. Collaborates directly with clients and external vendors to translate technical requirements into practical implementations.

Technical Skills

Programming: Python, Go, C/C++, JavaScript

Embedded Systems & Tools: Embedded Linux, Yocto Project, Zephyr RTOS, D-Bus, systemd

Connectivity: Bluetooth Low Energy (BLE), LTE, Zigbee, Z-Wave, Peer-to-peer networking, Redfish

Cloud & IoT: AWS IoT Core, Amazon Kinesis Video Streams, AWS IoT Managed Integrations, Amazon S3, AWS Lambda, MQTT

Hardware Platforms: Ambarella CV28M, MediaTek i350, Synaptics Astra SL2610, Nordic nRF9160, Nordic nRF52840

Backend & AI: REST APIs, Django, Gin, TensorFlow

Databases: Oracle Database, Microsoft SQL Server, SQLite, MySQL

Professional Experience

Principal Engineer | Foxconn | Feb 2023 - Present

- Translate client requirements into technical solutions and coordinate implementation with internal engineers and external vendors.

AI security camera

- Develop AWS IoT Core and Kinesis Video Streams services on Ambarella CV28M.
- Implement persistent MQTT queuing, broker-acknowledged removal, and retransmission after reconnection.

Smart-home hub

- Integrate AWS IoT Managed Integrations for Z-Wave connectivity on MediaTek i350; implement QR-code BLE onboarding with a 30-second authentication timeout.

AI box

- Adapt a vendor AI demo into Python REST API-controlled services and RTSP streaming on Synaptics Astra SL2610.

Senior Engineer | Foxconn | Feb 2022 - Feb 2023

- Developed a Nordic nRF9160/nRF52840 BLE gateway with scanning, pairing, and LTE cloud connectivity.

Senior Engineer | AUO | Jul 2021 - Feb 2022

- Maintained the manufacturing execution system for panel production.
- Trained a TensorFlow model to detect panel breakage using acceptable and defective images from manufacturing; validated detection using newly supplied images.
- Integrated the model into a standalone Python/Django inspection application linked from the existing manufacturing system to reduce manual inspection.

Senior Engineer | Quanta Storage Inc. | Oct 2019 - Jul 2021

- Developed production-line testing interfaces and TensorFlow-based automated optical inspection.

Junior Engineer | Quanta Storage Inc. | Oct 2017 - Oct 2019

- Maintained NAS web functionality using Python/Django and developed Thunderbolt 3 NAS firmware, including LED control and peer-to-peer access.
- Integrated the web interface with chip-vendor commands to update PD controller and display firmware.
- Implemented resumable downloads using partial HTTP requests; verified complete packages with SHA-256 before updating and restarted downloads on hash mismatch.

Education

National Formosa University

Master's degree, Information Management | 2014 - 2016 | GPA: 3.80