Rico

Principal Engineer

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LinkedIn / GitHub



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.

EXPERIENCE

Foxconn

Principal Engineer 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 Feb 2022 - Feb 2023

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

AUO

Senior Engineer 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.

Quanta Storage Inc.

Senior Engineer Oct 2019 - Jul 2021

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

Junior Engineer 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.

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

EDUCATION

National Formosa University

Master's degree, Information Management

2014 - 2016
GPA: 3.80