Ángel Hurtado Flores — Embedded Software Engineer

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Ángel Hurtado Flores
Angel-HF

Summary

Embedded Software Development Engineer at Amazon, focused on real-time media streaming and low-level systems. Experienced in C/C++20, Embedded Linux and real-time, performance-critical systems.

At Amazon, I took technical ownership of the streaming stack for hardware prototypes approaching launch, ensuring production readiness through targeted feature design & development, bug fixing, and post-launch observability. As main streaming PoC for various Ring devices, I coordinated closely with other teams, engineers and stakeholders to prioritize issues and deliver reliable customer-facing releases.

Experience

Jun 25 – Present — **Amazon** — Embedded Software Development Engineer — Madrid, Spain
Full-time

Amazon Devices – Ring. Firmware Streaming team.

- Embedded C and C++20
- Embedded Linux and FreeRTOS
- Streaming (RTP, SDP, GCC/TWCC, H264/H265, OPUS, BW Adaptation, Simulcast, media management/uploading)
- Observability tools (Splunk, Tableau)
- GenAI (Kiro, Claude Code, Agentic workflows)

Key achievements:

- Technical owner and primary point of contact for streaming pipeline integration in new Ring hardware devices.
- Delivered several end-to-end streaming features, from firmware implementation and debugging to post-launch observability and production monitoring.
- Architected, designed and implemented reusable embedded firmware modules for seamless deployment across multiple internal HW/SW platforms (RTOS, Embedded Linux) under strict memory and performance constraints.
- Diagnosed and resolved critical customer-facing issues beyond streaming, including audio processing, PoE integration **(resulting in x3 Ethernet performance)** and cloud interaction layers.
- Reduced development time by **30-50%** by leveraging GenAI/agent tools. **Top 1000** Kiro IDE users from all +300,000 corporate employees at Amazon.
- Contributed to interviews and hiring process of new Firmware Engineers, as well as onboarding and mentorship.

Sep 24 – Mar 25 — **Safran** — Embedded Software Engineer — Granada, Spain
Internship

- Embedded C
- Embedded Linux
- Time synchronization protocols (White Rabbit, PTP, NTP)

Key achievements:

- Modernized the NTP system in our devices, enhancing performance, security, and adding new functionalities.
- Developed an automated testing system to validate the complete combination of use cases for our devices, enabling proactive detection of bugs in core functionalities.

Mar 24 – Sep 24 — **Research Assistant** — CITIC, Universidad de Granada — Granada, Spain
Learnt from a researcher awarded an ERC Grant.

- Development and debugging of embedded systems
- Control & coordination of drone swarms
- Focus on swarm robotics

Education

2024 – 2025 **Master's degree in Data Science & Computer Engineering** — Universidad de Granada
Specialization in Computer Engineering
Grade: *8.8 out of 10*

2020 – 2024 **Bachelor's degree in Computer Science & Engineering** — Universidad de Granada
Specialization in Computer Engineering
Grade: *8 out of 10*

Skills

Languages **English (C1 Advanced), Spanish (Native),** French (basic)
Soft Skills **Communication, critical thinking, leadership,** teamwork, adaptability
Coding **C++20, C,** Python, Rust, Java
Embedded **Embedded C, Embedded Linux, Assembly (x86 & ARM),** FreeRTOS, CMake
Tools **Git, Linux, Bash Scripting, Docker, clang-tools,** Google Cloud
AI **NPU acceleration, Edge LLMs, Embedded AI,** Agentic Workflows

Certifications & Courses

Certifications

2019 **C1 Advanced** — Cambridge University Press & Assessment English

Courses

2024 **Cloud Engineer Learning Path** — Google Cloud Skills Boost
2023 **Ansible Basics: Automation Technical Overview** — Red Hat Training
Take your first steps with Rust — Microsoft Learn

Projects

My GitHub Profile I strongly recommend exploring my GitHub profile to discover the variety of projects I have been developing in recent years.

Rockobot

Mar 23 – Jul 23 Robot designed and built for a course while I was studying 3rd year of Computer Science. Won the class tournament, received an honors grade and the robot was even featured on the official Arduino Blog. Available on my GitHub profile.

ezrknpu

Mar 24 – Sep 25 Automated installation of libraries and programs needed to use the NPU found in the Rockchip RK3588 SoC. This chip is found on SBCs like the Orange Pi 5 or Radxa Rock 5B which are capable of accelerating ChatGPT-like LLMs through their NPU at under 10W of power consumption. Available on my GitHub profile.