

Ángel Alberto Carretero

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EXPERIENCE

- 09/2023–present **Software Engineer – Office of the CTO**, CANONICAL
We kickstart projects used across Canonical by working closely with the CTO. The main projects I have worked on are:
- **chisel**: a tool written in Go to create independent slices of deb packages which can be used to create very small and secure container images. More information: <https://github.com/canonical/chisel>.
 - **SQLair**: a Go library to conveniently write SQL. More information: <https://github.com/canonical/sqlair>.
- 09/2022–09/2023 **Software Developer Engineer I – Books Detail Page**, AMAZON (MADRID)
We own the book detail pages in all surfaces across www.amazon.com, a Tier-1 service that receives thousands of requests per second.
- Develop features using Java and Spring for the backend, JSPs and JS for the frontend.
 - Communicate a lot with different stakeholders including feature discussion with PMs and coordination with a lot of other teams.
 - Actively troubleshoot issues, participating in maintenance and operational excellence including on-call duty.
- 09/2021–06/2022 **Collaboration grant**, COMPUTER SCIENCE DEPARTMENT (UAM)
Design of an esoteric programming language. Creation of an interpreter from scratch in Rust. Includes: library of parser combinators, interpreter, typechecker and more.
- 06/2021–09/2021 **Software Developer Engineer Intern – Music ML**, AMAZON (BERLIN)
Recommendation systems for Amazon Music, orchestrator written in functional async Java.

EDUCATION

- 2017–2022 **Bachelor in Mathematics**, UNIVERSIDAD AUTÓNOMA DE MADRID
Bachelor in Computer Science, UNIVERSIDAD AUTÓNOMA DE MADRID
- Average 9.02/10, 14 courses with honors (top 2%). Awarded three times the scholarship for the top 1% of all university students in Madrid.
 - Math Bachelor's thesis: *Pseudo-Riemannian Geometry and Schwarzschild spacetime*. (9.9/10)
 - Computer Science Bachelor's thesis: *Formal design and implementation of a programming language based on facets*. (9.5/10)

LANGUAGES

- Spanish First Language.
English C1 Level, certified CAMBRIDGE ENGLISH ADVANCED.

PROJECTS AND MORE

Highlights:

- Concurrent HTTP server written in C from scratch.

- Created a small bespoke environment for Linux kernel development in QEMU consisting of Busybox and a custom initramfs to solve the Eudgyptula challenge. As part of the challenge solutions, created several kernel modules.
- Security related: HackTheBox (Hacker level), 4th place HackTheBox CTF Quals 2021, 5th place National Cyber League GC 2021.

Experience in: Go, Java, Rust, C, Python, GNU/Linux, Binary exploitation, Pentesting.