

Borja Castellano Extremadouro

Backend & Systems Software Engineer

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[Github](#) • [Portfolio](#) • [LeetCode](#) • [LinkedIn](#)

Summary

Systems and Backend Software Engineer with a strong foundation in mathematics and hands-on experience in low-level programming using **Rust, C/C++, and Java**. Skilled in **backend systems, parallelism, algorithm optimization**, and **high-performance computing**, with a proven record of **self-directed learning**.

Most of my technical background was built through independent study during my Mathematics degree and later formalized in a Software Engineering program, where I graduated **with highest honors**.

Excel at navigating complex codebases and enjoy contributing to high-performance, impactful software projects.

Skills

- **Programming languages:** Rust, Java, C, C++, C#, Bash
- **Frameworks:** JavaFX, Iced, Spring, Actix, Yew, Rocket, Unity, Hibernate
- **Technologies and Tools:** Docker, Git, Github
- **Databases:** MySQL, MariaDB, MS SQL Server, SQLite, MongoDB
- **DevOps and Infrastructure:** Nginx, Github Actions, Ubuntu Server, Proxmox, Linux, CI/CD
- **High Performance and Parallel computing:** MPI, CUDA, OpenMP
- **Others:** OOP, Algorithms, Data Structures

Languages

- **English:** Fluent
- **Castilian Spanish:** Native

Work Experience

CESGA, Santiago de Compostela, GA, Spain

Scientific and Parallel Computing Software Engineer Intern | 04/2025 – 07/2025

Developed and optimized HPC algorithms supporting research on uncertainty quantification and performance tuning.

- Made scalability studies and performed performance analysis using **perf** and **Valgrind** **improving performance up to a 95%**.
- Worked on codebases in **MATLAB, Fortran, C, C++, and Rust**.
- Parallelized research workloads using **MPI, CUDA, and OpenMP** on a multi-node **Gentoo** cluster (**Finisterrae III**) managed with **SLURM**.
- Collaborated with external institutions such as the **CSIC**.

Freelance, GA, Spain

Software Developer | 08/2024 – 04/2025

Delivered end-to-end software solutions for multiple clients, ensuring **reliability**, **performance**, and **timely delivery**.

- Built cross-platform desktop applications using **Java** and **JavaFX**.
- Deployed and maintained web services, REST APIs, and backend systems with NGINX, Proxmox, Ubuntu Server, Docker, Rocket, Actix, Hibernate, and Spring.
- Designed and implemented custom **TCP/IP** communication protocols.
- Developed automated tests to ensure **code quality and stability**.
- Maintained effective **communication with clients** to align technical solutions with business goals.

Open Source Collaborations

Aria Language | [Repository](#) | Active maintainer

Rust-based interpreted scripting language focused on code safety. Responsible for performance optimization, test maintenance, and feature development for both the language and its virtual machine.

Education

IES Chan do Monte

Bachelor's Degree in Software Engineering | 09/2023 – 07/2025 | GPA 4.0/4.0 – Highest Honors

University of Santiago de Compostela

Bachelor's Degree in Mathematics | 09/2018 – 07/2022 | GPA 3.3/4.0

Soft Skills

Research and analytical thinking, self-motivation, continuous learning, effective communication, creative problem-solving, leadership, and teamwork.