



FRANCISCO UCLES AYLLÓN

MATHEMATICIAN AND COMPUTER ENGINEER

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EDUCATION

University of Murcia, Bachelor's Degree in Computer Engineering – Murcia, Spain Sept 2020 – June 2026
Bachelor's Degree in Computer Engineering, part of a dual degree program together with the Bachelor's Degree in Mathematics, with a GPA of 9.06/10

- Specialization in operating systems, computer architecture and low-level programming

University of Murcia, Bachelor's Degree in Mathematics – Murcia, Spain Sept 2020 – June 2026
Bachelor's Degree in Mathematics, part of a dual degree program together with the Bachelor's Degree in Computer Engineering, with a GPA of 8.4/10

NTNU: Norwegian University of Science and Technology, Erasmus+ in NTNU – Trondheim, Norway Aug 2023 – July 2024

I completed an Erasmus+ exchange in Norway, where I independently developed a video game as part of a 6-person team. I also learned the fundamentals of AI, search algorithms, game theory, cybersecurity, among other topics.

TodoCode Academy, Courses in Architecture Design – Online Summer 2024
I completed several certified courses on the design and implementation of APIs and microservices architectures.

- Course: API Development with Spring Boot
- Course: Microservices with Spring Cloud
- Course: Spring Security

EXPERIENCE

Freelance Developer, Highway 2022 S.L. – Murcia, Spain Jan 2026

I developed a system to automate and improve document management, making the company's organization easier.

- Developed Excel-based programs to automatically manage and organize the company's asset documentation.
- Developed a Python desktop application to automate retrieving relevant company data from an API.

Research Collaborator, University of Murcia – Murcia, Spain Dec 2025 – present

While working on my Bachelor's thesis, I received a collaboration grant to work in the Information and Communications Engineering department.

PERSONAL PROJECTS

Service Management Lab

Sept 2025 – Dec 2025

I designed and implemented a service architecture for controlling and monitoring the network of a fictitious company. I also deployed it alongside other services using virtualization.

- Designed a secure and robust architecture for the services.
- Designed and deployed a Kubernetes cluster.
- Deployed mail, DNS, and web servers.
- Deployed and managed authentication and mutual authentication via an LDAP directory and a database.
- Deployed the setup in a virtualized environment using VirtualBox to simulate a real-world scenario.

Container Manager

I designed and implemented a basic Docker-style container management system. It includes a CLI for making requests, a daemon responsible for managing all containers, and a runtime (+ shim) responsible for creating and monitoring each container.

Graphics Engine Design

present

I am building a small graphics engine in C++ for rendering with OpenGL. The goal is to create a library that supports physics and eventually turn it into a game engine.

SKILLS

Programming Languages and Libraries: Python, C++, CUDA, Java, R, pandas, numpy, Spring Boot, OpenGL

Developer Tools: Kubernetes, Docker, Git, GitHub Actions

LANGUAGES

Spanish: Native

English: B2, Cambridge certified

French: A2, basic level

Japanese: A2, basic level, currently learning