# Eduardo Rodríguez Sánchez

Graduate Computer Scientist and Engineer



17/08/2002

edubuntu2002@gmail.com  $+34\ 611\ 457\ 191$ 

Madrid, Spain

3, Francisco Ribera, 28918 Leganés



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# Profile

• Hard working

• Self-taught

• Highly motivated

• Challenge seeker

• Fast learner

# **EDUCATION**

#### 2023 - 2024 Computer Exchange year as a GTScience senior student in Georgia Institute of Technology. GPA: 4.0/4.02020 - 2023 Computer Student in the UC3MScience Polytechnics and Engi-Campus of Madrid for 3 years. Average: neering 9.1/102018 - 2020 Studied 1st of Science IES Julio bacc. Baccalaureate at Verne Colorado Spring

# PERSONAL STATEMENT

My passion for technology is rooted in my fascination of automatic execution of tasks, the ability to process vast amounts of data and perform calculations at great speeds. I am particularly interested in High Performance Computing and how computers can be optimized and scaled.

Early Colleges, USA

As technology continues to advance, I believe these areas will become even critical. They are the building blocks of future innovations in AI, data analytics, software development, and more. My goal is to be at the forefront of these developments, which is why I am committed to furthering my expertise in this field. To that end, I plan to pursue a European Master's in High-Performance Computing during the 2025/26 academic year, where my goal is to deepen my knowledge and contribute to computer research and technology.

# ABOUT ME

Age: 22 years old

Interests: High Performance Computing, Operating Systems, Distributed Systems, Hardware, Embedded Systems, Low Level Programming

Platforms: Gentoo, Arch, SLES, Ubuntu, Rocky, FreeBSD,

Windows

Hobbies: Physics, Video games, Hiking, Biking, Traveling

# LANGUAGES

Spanish Native ••• English Fluent Mandarin Beginner

 $\mathbf{C}$ C++Python MIPS/x86Bash scripting Java



# PROFESSIONAL EXPERIENCE

# Samsung Electronics (Zhilabs)

Role: Software Engineer

### • Recursive Descent Binary Parser for Network Traces

- Timeline: June - July 2023

#### - Contributions:

- \* Developed a fully functional recursive descent binary parser to efficiently access and collect network error data from traces.
- \* Enhanced system performance by providing quick and reliable data extraction, critical for troubleshooting and network optimization.

#### • Parallel Network Traffic Simulation

- Timeline: June - July 2023

#### - Contributions:

- \* Upgraded an existing network traffic simulator from sequential execution to parallel simulation across multiple antennas.
- \* Significantly improved the simulator's performance, enabling more accurate and scalable testing of network scenarios.

# • High-Performance Network Trace Proxy

- Timeline: January - March 2024

#### - Contributions:

- \* Designed and implemented a high-performance proxy for network traces, built from the ground up.
- $\ast$  Achieved a breakthrough throughput of 86 Gb/s for unencrypted packet forwarding, surpassing all performance expectations.
- \* Presented the project as my Bachelor's Thesis in Summer 2024, marking the capstone of my undergraduate degree.

# • RAN (Radio Access Network) Assistant

- Timeline: July - October 2024

## - Contributions:

- st Engaged from the Proof of Concept stage, ensuring robust research and architecture design.
- \* Using a blend of LLM, NLP, ML, and traditional heuristics to build a solution.
- \* Implemented a multi-agent system capable of: understanding natural language, learning from internal telco documentation, and interacting directly with Samsung's network management tools.
- \* The most relevant features include: Telco Question Answering, Anomaly Detection, Root Cause Analysis, and Solution Proposal.

## Ericsson

Role: Software Developer

## • Research and Development for 5G Core

- **Timeline:** Ongoing since December 2024

### - Contributions:

- \* Member of a small team dedicated to User Plane Analytics and Optimization of the core network behind 5G technology.
- \* My role consists of developing new features (e.g. antenna geo-redundancy algorithms), creating network improvements (e.g. reducing contention in a multi-thread process), and fixing trouble reports (e.g. solving a segment violation error).