

JOAQUIN LOPEZ

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SANTIAGO, CHILE

ABOUT ME

Software developer and Computer Engineering from the University of Chile. I have experience in Python and data processing libraries such as numpy, matplotlib, and pandas.

Additionally, I am proficient in several system languages and backend frameworks for web development, complemented by skills in frontend technologies. I also have knowledge of SQL and NoSQL databases, as well as massive data processing and graph processing for the web.

I am interested in developing software systems in embedded systems, topics related to semantic web and networks.

EDUCATION

University of Chile

2024

B.S. | *Engineering Sciences with a major in Computing*

Santiago, Chile

Professional Title | *Civil Engineering in Computing (Currently pursuing)*

TECHNICAL SKILLS

High proficiency languages: C | Python | C# | Bash | Rust | SQL | HTML

Intermediate languages: Javascript | Java

Frameworks and libraries: Flask, Django (backend) | Bootstrap, vue (frontend) | Pandas, Numpy, Matplotlib (Data Processing) | Hadoop, Spark (Mass Data Processing)

Embedded Systems Frameworks: Arduino-IDE | esp-idf

Databases: PostgreSQL | MySQL | Sqlite | Neo4J | MongoDB

Version control systems: Perforce | Github

EXPERIENCE

R&D Engineer L1 | *Synopsys*

Feb 2025 - Present

Software Development and support, DevTools Team, Chile

Santiago

Working as a Engineer for developing internal solutions and offering support to internal clients.

- Experience in “Check-in” processes and VCS.
- Developing tests for various applications.
- Creating simple pipelines in Github Actions.

Software Developer | *Niclabs*

Sep 2024 - Jan 2025

Software development for DNS library in Rust

Santiago

- Implementation of specifications of various RFCs for a stub resolver
- Implementation of authentication functionalities with DNSSEC

Software Development Intern II | *CCHEN*

Jan 2024 - Mar 2024

Development of a plasma camera control system

Santiago

Implemented a camera control system for simultaneous photo capture

- Cameras can be configured in Real-time
- Ethernet network for data transfer

Software Development Intern I | *SPEL*
Software development for Cubesats

Jan 2023 - Oct 2023
Santiago

The project consisted in the development of a software system for Cubesats written in C, which involved the following tasks:

- Port the software to a new platform (esp32 + FreeRTOS)
- Change the communications library (libcsp)
- Implement a simple HAL for a gyroscope connected via I^2C

Teaching Assistant | *University of Chile, FCFM*
Teaching assistant for various courses

2022-2024

- Introduction to Calculus
- Introduction to Algebra
- Discrete Mathematics for Computer Science
- Systems Software Programming
- Theory of Computation

PROJECTS

Thesis | *Semantic network extraction from dictionaries*

Jun 2024 - present

Generation and extraction of a semantic network from a dictionary of synonyms

- PDF scraping with Tesseract OCR
- Network generation from extracted data
- Implementation of a simple application to visualize the network using Neo4J and visjs
- Study of the network, its topology and properties with networkx

Software Project: dnsrust | *Niclabs*

Mar 2024 - Aug 2024

Software development for a DNS library in Rust

Santiago

In this course with a team of 5 people, we worked a DNS library in Rust, which involved the following tasks:

- Implementation of shared key authentication TSIG
- Implementation of some DNSSEC security extensions
- testing and debugging of those implementations

LANGUAGES

- English (C1 Advanced)
- Spanish (Native)