# Nicolás Zhilie Zhao

GRADUATE STUDENT

📱 (+34) 644 338 822  |  ✉ nicozcs2019@gmail.com

## Skills

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|---|---|
| **Programming languages** | C/C++, Verilog, Java, Python, Assembly, Rust, Lua, Bash |
| **Languages** | Spanish, English, Chinese |
| **Other** | Xilinx Vivado, FPGA, Vim, GDB, Docker, Cloud storage, SQL, GNU Make, Github Actions |

## Experience

**Khaos Research** *Edificio de Investigación Ada Byron, Málaga Spain*

TECHNICAL SPECIALIST *Aug. 2022 - Dec. 2022*

- Contributed at building a Flask microservice for data visualization. Some of the relevant contributions are backend and frontend development, unit testing, and CI/CD pipelines
- Created a Svelte web application for rendering ontologies' metadata and relevant properties. This was developed with SvelteKit, Typescript and TailwindCSS

## Projects

**Fauna Monitoring** *Khaos Research*

TECHNICAL SPECIALIST *Aug. 2022 - Oct. 2022*

- A Flask/Javascript web application designed to display data about vultures' activity
- Team Project
- It uses Jinja2 templating, Leaflet, ChartJS and BootstrapCSS to provided an comfortable user experience
- Data parsing and serializing was done using Pandas, to provided close to zero latency experience
- Contribution: Unit testing and integration testing
- Contribution: API refactoring, design and development
- Contribution: Frontend development
- Contribution: Setting up Docker for local Minio and Redis server for development
- Github Actions CI

**Aether Portal** *Khaos Research / University of Malaga*

STUDENT *Dec. 2023 - Mar. 2023*

- A SvelteKit frontend application for displaying relevant data about ontologies
- Final Year Dissertation's project
- Allows filtering and searching of relevant properties of the stored ontologies
- It displays important information such as the classes of an ontology, datatype properties, object properties and individuals
- Server side rendering powered by SvelteKit
- TailwindsCSS was used to provided a customizable CSS experience
- A preprocessing application developed in Python was used to serialize ontology data into JSON format
- Docker
- Github Pages
- Github Actions CI/CD

**RoomTrackr** *University of Malaga*

STUDENT *Oct. 2022 - Dec. 2022*

- A React and FastAPI Fullstack Webapp develop during the Web Engineering course
- Team project
- Contribution: EMT's bus live position and bus stations
- Contribution: Leaflet for map rendering
- Paypal payment
- Imgur for image storage
- MongoDB as Database
- Docker
- Github Actions CI/CD

**VM Scripting**

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- Bash scripts for automating simple tasks in ESXI 5.5
- Individual project
- Developed during the Virtual Architectures course
- Creation, deletion, modification and snapshots of VMs

# Education

**University of Malaga**

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- Final Year Dissertation: 9.5
- Computers' Technology: 9.9
- Object Oriented Programming: 9.9
- Network and Distributed Systems: 9.6
- Systems Programming and Concurrency: 9.6
- Embedded Systems Software: 9.3
- Web Engineering: 9.2
- User Interface: 9.1