

# Nicolás A. Ortega Froysa

SOFTWARE ENGINEER · NETWORK ADMINISTRATOR

Seville, Spain

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## Skills

**Programming** C, C++, x86 Assembly, Rust, Bash, Java, PHP, Oracle PL/SQL,  $\LaTeX$   
**Tools** Linux, CMake, Docker, DOxygen, SQLite, MariaDB, GitLab CI, SSH, NGinx, Vim  
**APIs** OpenMP, OpenGL 2.0/3.0+, C++ STL, OpenAL, NCurses, Qt  
**Languages** **Native:** English (C2), Spanish · **Novice:** Portuguese, Esperanto

## Experience

### DMUX

DEVELOPER - CO-PROJECT LEADER

*Remote*

*Sep. 2015 - Nov. 2016*

- Development of a 3D, derby-style, shooter game written in modern C++.
- Collaboration with various other developers in large-scale project using Git version control tool.
- Configuring the CMake build system for the project, linking to dependency libraries.
- Had to adapt to a constantly changing development environment.
- Asynchronous communication with teammates in different timezones.

### Servicio de Asistencia Religiosa de la Universidad de Sevilla

*Seville, Spain*

WEBSITE ADMINISTRATOR

*Sep. 2019 - PRESENT*

- Managing the Drupal instance.
- Updating the website's content.
- Creating fillable PDF forms.
- Serving as general technical support for the university chaplain.
- Leading group activities (e.g. Bible studies).

## Education

### CEU San Pablo Andalucía

*Bormujos, Spain*

DEGREE IN ADMINISTRATION OF COMPUTER NETWORKS

*2021 - Est. 2023*

- Exercises in Linux system administration.
- Configuration of complex virtual networks using Cisco Packet Tracer™.
- Setting up Docker instances of web services.
- Management of Oracle databases and programming with Oracle PL/SQL.

### International Baccalaureate Diploma Programme

*Minnesota, USA*

IB DIPLOMA GRADUATE

*2015*

- Higher level exams in English, Spanish, and Economics.
- Standard level exams in Physics, Visual Arts, and Calculus.
- Final paper on The Free Software Movement and Intellectual Property.

## Projects

### Colonel

A small personal kernel project written in C and Assembly. Compatible with x86 architectures, bootable with GNU GRUB, and built using the GCC cross-compilation tool-chain and the CMake build system.

### Indivisible

A highly optimized prime number generator with  $O(n)$  time complexity for  $n^{\text{th}}$  prime generation, and  $O(\sqrt{n})$  for prime testing. Written originally in C using OpenMP, then later ported to Rust.

### SAUS

Scripted AUdio Software is a very flexible command-line tool for real-time scripted audio filtering via JACK audio inputs. The C program passes input frequencies through a user-defined script written in Python.