Naomi **Ferreira**

Backend Engineer, Open Source Contributor

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EXPERIENCE

Canonical | Software Engineer — Mar 2023 -- Present

- Working on the Juju charm orchestration project as part of the Charm Tech team
- Juju core maintainer, focused on the storage subsystem

Canonical | Software Engineering Intern — Jun 2022 -- Feb 2023

- Designed and implemented a lightweight status dashboard for charm deployments, including unit tests, a training project that visualizes Juju model health across Kubernetes and machine clouds. Built using Go, Kubernetes, and Prometheus, with three parts: the collector, the API, and the web dashboard.
- Contributed to the Juju storage provider interface as part of the Charm Tech team. This work targets more reliable persistent-volume handling across cloud providers.

Nimbus Labs | Technical Writer, Apache APISIX — Jan 2022 -- May 2022

- Redesigned developer and user documentation for a plugin ecosystem. Created interactive tutorials collaborating with the community and integrating their feedback into the documentation.

Google Summer of Code 2021 | Contributor, The FOSSology Project — May 2021 -- Aug 2021

- Upgraded the build system from Unix Makefile to a more optimized and flexible CMake generator.
- Migrated the CI/CD of the project from Travis CI to GitHub Actions, removing the dependency on a third-party CI and improving build times.
- Refactored and fixed years-old unit and functional testing code written in C/C++ and PHP; CI time was reduced from 1-2 hours to 20-25 minutes.

Delta Systems | Java Development Intern — Jan 2021 -- May 2021

- Designed and developed an inventory and billing management app using Spring Boot and PostgreSQL. Created REST API endpoints according to the functional requirements of the software.

PROJECTS

Automated Status Badge GitHub Action | Python, Docker, GitHub Actions, Bash Scripting

- Built an automated build-status badge generator using Python scripts, shell scripts, Docker, and GitHub Actions. Currently has 60+ stars on GitHub and is used across a dozen internal repositories.
- Generates a colorful SVG summary of CI health across a project's last week of runs, updated daily. The image can be embedded into READMEs and status pages.

Jupyter-Forth | C, C++, Jupyter Notebook

- Built a Jupyter kernel for the Forth language using the Xeus framework, C, and C++. It executes Forth programs word by word in Jupyter Notebook and displays the stack state after each line.

Geo-Tiles Extraction from GeoTIFF | C++, GDAL, Boost.GIL, CMake

GeoTIFF has been used for decades to store and transfer georeferenced raster images and needs specialized software to view them; this project extracts tiles as JPEG or PNG that can be viewed by common image viewers.

EDUCATION

Federal University of Technology, Recife | B.Sc in Computer Science — 2017 -- 2021

CGPA: 8.7/10

Courses -- Advanced Calculus, Statistics, Probability and Queuing Theory, Algorithm Design, Digital Logic Design, Database Management Systems, Data Structures, Operating Systems, Compiler Design, Computer Networks

SKILLS

Programming Languages

Go, Python, C, C++, Rust, Bash Scripting

Technologies

- GNU/Linux, Ubuntu, CI/CD, Vim, CMake
- Docker, Kubernetes, Juju, Prometheus