FRANCISCO LOPES

Software Engineering · R&D Ops

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EXPERIENCE

Software Engineer Intern · Neadvance
Aug 2024 – Sep 2024 Braga, Portugal

- Identified a workflow bottleneck where large Git pushes were difficult to review, and independently designed and built a Git diff visualisation tool from scratch using Python
- Developed a clean interface that parses and displays code changes with clear indentation, highlighting added and removed lines for rapid review
- Delivered a measurable improvement in the team's code review efficiency, with the tool adopted and continued in active use after the internship ended

EDUCATION

MSc Software Engineering · **University of Minho**
Sep 2025 – Present Braga, Portugal

BSc Software Engineering · **University of Trás-os-Montes and Alto Douro**
Sep 2022 – Jun 2025 Vila Real, Portugal

PROJECTS

Distributed IoT Telemetry Platform · **MSc Distributed Systems**
Feb 2026 – Jul 2026 Grade: 18/20

- Designed and implemented concurrent message handling using Java NIO and RxJava reactive streams; ZMQ DEALER/ROUTER for scalable async inter-server communication
- Gained deep practical understanding of distributed coordination, message-passing protocols, and fault-tolerant system design

Votium — Blockchain Voting Application · **BSc Final Project**
Feb 2025 – Jul 2025 Grade: 17/20

- Architected and deployed smart contracts in Solidity on an Ethereum-compatible (Ganache) network, designed the on-chain data structures for vote storage and verification
- Built the full frontend in React and JavaScript with real-time blockchain event listening, giving me end-to-end ownership of a Web3 product stack

Automated Cloud Deployment & Optimization of AirTrail · **MSc Cloud Computing**
Set 2025 – Dec 2025 Grade: 17.5/20

- Automated the full deployment lifecycle of a web application on Google Kubernetes Engine using Ansible, covering cluster provisioning, storage, networking, and health checks
- Load-tested the platform with Locust and used cloud monitoring data to identify and eliminate a scalability bottleneck through autoscaling, cutting the error rate from 21% to 4% and halving latency under load

SKILLS & TECHNOLOGIES Light involvement

Cloud & Infrastructure: Kubernetes (GKE) · Docker · Ansible · Google Cloud Monitoring · Locust · PostgreSQL

Languages: Python · Java · Bash · JavaScript · Erlang · SQL

Frameworks & Tools: Git · ZeroMQ · RxJava · Java NIO · React · Node.js

Domains: Cloud operations & Monitoring · Distributed systems · Infrastructure Automation · Developer Tooling

LANGUAGES

Portuguese (Native) · **English** (Fluent - written and oral)