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## **Education**

### Faculty of Engineering of the University of Porto (FEUP)

Sep 2017 - Present (Exp. Jul 2022)

Porto, Portugal

INTEGRATED MASTERS (BSc + MSc) IN INFORMATICS AND COMPUTING ENGINEERING

- Current cumulative GPA: 18.42 / 20; currently enrolled in the 4th year
- Relevant coursework: Systems Architecture, Distributed Systems, Web App Development, Algorithms & Data Structures, Artificial Intelligence
- Received a Merit Scholarship in the 2018/19 Academic Year, given to the best students in Portugal.

# Jobs & Experiences\_

#### Research Assistant - "Big Data for Energy"

Feb 2020 - Present

INESC TEC ☑

Porto, Portugal

- Developing a platform to foster energy analytics for R&D institutions, by automating energy and weather data collection and management.
- Automated energy data collection by creating scripts that periodically fetch data from APIs of electricity data sources in Europe.
- Implemented detection of missing values by creating software that monitors DB with 130+ tables, each one with an average of 3 million rows.
- Allowed registered users to extract desired data by building an authentication layer and a REST API, and by helping create a user interface.
- Organized and presented a hands-on workshop for the INESC TEC Power and Energy Systems team, to showcase the tool for their future usage.
- · Main technologies used: Python, Django, Pandas, Apache Cassandra, RabbitMQ, Celery, Nginx, Vue.js, Docker, GitLab CI/CD.

**Teaching Assistant** Feb 2021 - Present

FACULTY OF ENGINEERING OF THE UNIVERSITY OF PORTO (FEUP)

Porto, Portugal

Jul 2020

Helping students in the IART - Artificial Intelligence subject with Search Algorithms, Machine Learning, and Natural Language Processing.

**Software Engineer Intern** CRITICAL SOFTWARE Coimbra, Portugal

· Learned about the methodologies and tools used in critical projects, such as software for airplanes, trains and banks.

- Built a real time chat service using **Java** and **Kafka**.
- · Built an automatic encryption/decryption system for smart meter data with Java, SSL and XML documents.

## **Projects**

#### Labcentric - Monitoring and Management System for Laboratories 🗹

Oct 2020 - Present

PHP, Laravel, Javascript, HTML, CSS, PostgreSQL, Python, Flask, OpenCV, Docker, Heroku, Gitlab CI/CD

Team of 8 people

- Team leader of a project developed for the Dr. Ricardo Jorge National Health Institute 🗹.
- · Developed web app for management of reagents, samples, procedures and executions, results, and other important data for the institute.
- Developed a Computer Vision module that identifies QR Codes on reagents and monitors the scientist's steps when executing a procedure.
- Integrated a CI/CD pipeline for linting, testing, and deploying the application on a Heroku server.

#### Distributed Backup Service for the Internet

May 2020 - Jun 2020

Team of 4 people

JAVA, SHELL

• Developed a distributed P2P system with the purpose of backing up files divided in chunks in other peers.

- Protected the system against faults and raised its stability and scalability by using and implementing the Chord Protocol.
- Assured the privacy and integrity of the messages, and increased system security by implementing secure communication channels with JSSE.
- Achieved high degrees of concurrency and parallelism by using thread-pools and non-blocking I/O.

#### Covid Forecast Tool 🗹

May 2020 - Jun 2020

PYTHON, JUPYTER NOTEBOOK, SKLEARN, PANDAS, NUMPY, MATPLOTLIB, SEABORN, KAGGLE DATASETS

Team of 3 people

- Created a tool that predicted Covid-19 cases and deaths for various countries/regions, with an average of around 90% accuracy, by training several regression models using Covid-19 data from a Kaggle dataset that contained the confirmed, death, and recovered cases for each day.
- Compared several Machine Learning algorithms, such as Neural Networks, Support Vector Machines, K-Nearest Neighbours and Random Forest.

#### OpenCX - Mobile App for Conferences 🗹

Oct 2019 - Jan 2020

FLUTTER, SQLITE, GHERKIN, BLUETOOTH

Team of 4 people

· Contributed to an open source project by developing a mobile app for conferences, that allows the user to see the conference's program and to make a custom schedule, receiving push notifications when an event is about to start and also allowing BT scanning for near-by events.

# Skills

Git, Java, Python, Django, Javascript, C/C++, HTML/CSS/PHP, Laravel, Node.js, SQL, REST API, OOP - Proficient

Technical Docker, React, Go, CI/CD, Agile/Scrum, Unix/Linux - Medium Understanding

**NoSQL** - Prior Experience

Languages Portuguese(Native), English(Full Professional Proficiency), Spanish(Limited Working Proficiency), French(Basic understanding)