Eduardo **Ribeiro**

Software Engineering student @ FEUP · Porto, Portugal

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Education

Faculty of Engineering of the University of Porto (FEUP)

Sep 2017 - Present (Exp. Jul 2022)

Integrated Masters (BSc + MSc) in Informatics and Computing Engineering — ***Porto, Portugal***

- **Current cumulative GPA: 18.37 / 20**; currently enrolled in the 4th year
- **Relevant coursework:** Algorithms and Data Structures, Distributed Systems, Web App Development, Databases, 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"

Fev. 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.**

Software Engineer Intern

Jul 2020

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**.

Active Member

Nov 2019 - Present

NIAEFEUP - Informatics Engineering Student Branch @ FEUP — ***Porto, Portugal***

- Participated in and organized a variety of events/projects in different areas, ranging from Cybersecurity to AI to Competitive Programming.
- Established 5 sponsorships from companies for SINF, a Software Engineering event in FEUP, as part of its External Relations Department.

Projects

Distributed Backup Service for the Internet

May 2020 - Jun 2020

Java, Shell — ***Team of 4 people***

- 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

Out 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 was about to start and also allowing BT scanning for near-by events.

Security Van Routing

Mar 2019 - May 2019

C++, GraphViewer (Java API) — ***Team of 3 people***

- Calculated paths for trucks with pick up and delivery of items along the way, tested in graphs with up to 21.2k nodes and 21.7k edges, by implementing various "shortest path" (and similar) algorithms (Dijkstra, Floyd-Warshall, and more), and some heuristic algorithms.

Skills

Technical	**Git** (3 years); **Java** (2.5 years); **C/C++** (3 years); **Python** (1 year); **Javascript** (2 years); **HTML5, CSS, PHP** (1 year); **Docker** (1 year); **SQL** (1.5 years); **NoSQL (Cassandra)** (7 months); **Node.js**, **REST API**, **OOP**, **CI/CD**, **Agile/Scrum**, **Unix/Linux**
Languages	**Portuguese**(Native), **English**(Full Professional Proficiency), **Spanish**(Limited Working Proficiency), **French**(Basic understanding)