João **Varela**

SOFTWARE DEVELOPMENT ENGINEER @ AWS

☐ (+351) 927682881 | ✉ joao.rafael.varela@gmail.com | ⌨ Revuj | in joao-rafael-varela | www.joaovarela.me

Experience

Software Engineer
Berlin, Germany

AMAZON WEB SERVICES (AWS)
September 2022 - Present

- Integrated the *Managed Development Environments (MDE)* team, which provides **easily customizable development environments that are hosted in the cloud**. These environments are repeatable and allow all users of a project or team to start contributing almost instantly.
- **Worked on various customer requested features and operations work** to guarantee operational excellence of a complex service built on top of other AWS services.
- Wrote design documents and participated in design discussions, team planning, operational reviews, and Scrum related meetings.
- Technologies: **Go**, **Typescript**, and **AWS Cloud**.

Web Engineer (Research Grant)
Porto, Portugal

INESCT TEC
November 2021 - July 2022

- **Elicited requirements**, **designed**, and **implemented the interfaces** of an **eXplainable AI (XAI) system**, developed within the scope of the European project *TRUSTAI* - a platform that allows its users to create XAI projects, upload datasets, select a model that fits the problem (classification, regression, and prescription), train and adjust it, and visualize the results graphically and textually.
- **Researched interaction design methods** for **human-guided XAI** applications.
- Technologies: **React** and **Typescript**

Software Engineer (Internship)
Berlin, Germany

AMAZON WEB SERVICES (AWS)
June 2021 - September 2021

- Integrated the *SageMaker Autopilot* team, which owns the AutoML and AMT (Automatic Model Tuning) parts in the *AWS Sagemaker* service.
- Worked on two different customer requested projects: **Model Insights** which allows the **automatic generation of reports** regarding the AutoML generated models; **Snowflake Integration** which consisted of **integrating the usage of** *Snowflake* **datasets** with the Autopilot service.
- Wrote design documents and participated in design discussions, team planning, operational reviews, and Scrum related meetings.
- Technologies: **Java**, **Python**, and **AWS Cloud**.

Software Engineer (Research Grant)
Porto, Portugal

INESC TEC
September 2020 - December 2020

- **Developed ETL scripts** to extract data from pharmacies' databases and then transform and load it into a data warehouse.
- **Developed stock management dashboards** in PowerBI, for the *BESTORDER* project, that provide a set of tools for assisting in the inventory management of various pharmacies.
- Technologies: **Python** and **MySQL**.

AI Researcher (Internship)
Porto, Portugal

INESC TEC
July 2019 - August 2019

- **Studied the influence of a dataset's face diversity on the performance of a face classifier.**
- **Researched on how to minimize the resources utilized when training the classifier** using techniques such as PCA (Principal Component Analysis) and Guided Selection (using K-means Clustering) while maintaining its performance.
- Technologies: **Artificial Intelligence**, **Deep Learning**, **Computer vision**, and **Python**.

Projects

Voxulus https://github.com/Revuj/Voxulus

- Voxulus is a **browser extension made for people with motor disabilities** and **allows anyone to navigate the web freely**. The tool combines three main components: **Head Movement Tracking** that enables the user to simulate a standard mouse cursor; **Voice Commands** to perform tasks such as clicking, scrolling, and tab management; and **Speech-to-Text** functionalities that allow the user to write anywhere.
- Technologies: **HTML**, **CSS**, **Javascript**, **Annyang**, **Facepointer**

Skills

Software	Javascript, Typecript, Java, C, C++, PHP, SQL, Python, Prolog, React, Node.js, Express, mongoDB, Laravel, Figma
Languages	Portuguese (native), English (proficient), Spanish (intermediate), German (basic)

Education

FEUP - Faculty of Engineering of University of Porto
Porto, Portugal

INTEGRATED MASTERS IN INFORMATICS AND COMPUTATION ENGINEERING - 3.6 GPA (18/20)
2017 - 2022