Pedro Alexandre Parreira Primor

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About me

Computer engineer with a passion for solving data analytics problems by applying machine learning and data mining techniques. Recently delivered my master's thesis on the optimization of the last-mile delivery step in the postal sector. The project, in collaboration with CTT – Correios de Portugal, S.A.., focused on the development of a framework to produce optimal routing solutions taking as input the postal traffic destined to distribution centres.

Professional experience in front-end web development and mobile game development but my motivation currently stands in the machine learning field. I believe artificial intelligence and language models in particular will be the most impactful technological development in the 2020s. Looking for entry-level or internship job opportunities and focusing on building a data science portfolio at the same time.

Education

NOVA School of Science and Technology   Sep. 2017 – Present
Integrated Master in Computer Engineering   *Lisbon, Portugal*

Relevant coursework:

Algorithms and Data Structures

Artificial Intelligence

Data Modelling

Discrete Mathematics

Information Retrieval

- Implemented a search-based conversation framework and experimented with various language models;
- Applied NLP methods like word2vec and BERT to improve the search results ranking;
- Used a conversation tracking method (T5) to rewrite queries based on past utterances.

Machine Learning

- Compared the use of a Naive Bayes and Support Vector Machine classifiers to distinguish between genuine and forged banknote-like specimens;
- Examined and classified a set of bacterial cells using several machine learning techniques including feature extraction, selection and clustering methods;

Technische Universität Dresden   Apr. 2021 – Oct. 2021
Erasmus+ Programme Exchange Period   *Dresden, Germany*

Work experience

Front-end Developer Intern   Apr. 2020 – Jul. 2020
Altitude Software   *Lisbon, Portugal*

- Developed React components to replace existing ASP.NET components in a contact centers management platform;
- Integrated the components with the application's back-end using C# and ASP.NET.

Front-end Developer and QA Assistant   Jul. 2019 – Aug. 2019
Automatication   *Lisbon, Portugal*

- Developed React components to display the result of some unit tests on a web page;
- Experimented with AWS Amplify's authentication mechanism;
- Learned to develop unit tests for JavaScript environments using Jest.

Projects

Optimization Problems in the Postal Sector | *Python, CPLEX, Tableau*   Dec. 2021 – Dec. 2022
- Operations research and data analytics project;
- Had the main goal of optimizing the last-mile delivery step of the postal distribution process;
- Explored how to model and solve a vehicle routing problem adapted to the postal sector, in general, and the company, in particular;
- Provided meaningful insight and visualizations regarding routing solutions with Tableau.

My Spelling Game | *Unity, C#, SQLite*   Jul. 2018 – Nov. 2018
- Developed and published a 2D mobile game for Android/iOS along with a graphic designer.

Events

EUROPT Summer School 2022 | *Mathematical optimization, Game theory*   Aug. 2022

Android Training Program | *Android Studio, Java, Kotlin*   Nov. 2019

Unity Workshop - JORTEC Informática 2019 | *Unity, C#*   Feb. 2019

Languages

Native: Portuguese
Proficient: English

Technical Skills

General-purpose languages: Java, C#, Python, Kotlin
Web development: HTML, CSS, JavaScript, TypeScript, React, Redux, MUI, webpack, Node.js
Cross-platform & mobile game development: Flutter, Unity, Firebase, OneSignal
Developer tools: Git, Docker, npm
IDEs: Eclipse, IntelliJ, Pycharm, Visual Studio, VS Code, Android Studio
Python libraries: NumPy, pandas, Matplotlib, Seaborn, scikit-learn, TensorFlow, PyTorch, OpenCV
Database management systems: MySQL, MongoDB, Neo4j
Test-automation frameworks: Jest, Cypress
Software packages: Tableau, CPLEX