Pedro Fonseca

+351 932341755 | contact@pedrofonseca.me | pedrofonseca.me | linkedin.com/in/pedrofonseca02

Introduction

I'm a software engineer based in Porto, Portugal. I enjoy creating things that bring value to people's lives, whether that be websites, applications, or anything in between. Currently doing my MSc at FEUP and looking to pursue Artificial Intelligence and Software Engineering. I've managed to gain a decent amount of experience and valuable knowledge from all different kinds of fields throughout my projects. Some of which are present on my website.

Education

University of Porto — Porto, Portugal
MSc in Informatics Engineering & Computing — *Sep. 2023 – Present*

University of Porto — Porto, Portugal
BSc in Informatics Engineering & Computing - GPA: 16 — *Sep. 2020 – Jun. 2023*

Colégio 'Nossa Senhora do Rosário' — Porto, Portugal
Science & Technology - GPA: 19 — *Sep. 2005 – Jul. 2020*

Experience

Software Engineering Intern — Jan 2023 – Jun 2023
Armis Group — *Porto, Portugal*

- Developed and implemented advanced machine learning algorithms for transaction categorisation
- Integrated transaction categorisation system into a banking application
- Conducted thorough testing and debugging to ensure a smooth user experience
- Demonstrated strong problem-solving skills and attention to detail
- Delivered high-quality code and met project deadlines
- Resulted in the dissertation: *Soluções Fintech ARMIS - deteção e classificação de padrões de despesas em sistemas de Gestão de Finanças Pessoais*

Product Developer — Jan. 2023 – Present
Freelancing — *Porto, Portugal*

- Specialised in valuable website and app solutions, collaborating with Pressmedia and Lasermaq
- Known for adaptability, creativity, and consistent delivery of remarkable outcomes
- Entrepreneurial mindset, skilled problem solver, adept at turning ideas into reality

Software Developer & Co-Founder — 2021 - 2023
North Space — *Porto, Portugal*

- Responsible for website design and development
- Software Developer for the Avionics
- Software Developer for the Ground-Station

Software Developer & Co-Founder — 2019 - 2021
SatEmLat — *Porto, Portugal*

- Participated twice in the CANSAT competition and won the awards: - Best Team Work; - Best Technical Performance
- Coded a can-sized satellite's sensors and communication protocol
- Built the ground-station software for live data analysis of the satellite and live, shareable, graphing of data
- Presented the project in front of the CANSAT jury and Portugal Space

Projects

Supervised Learning - Basketball Playoffs | *Python, Pandas, Numpy, SciKit-Learn* Sep 2023 – Present

- Developed a supervised model to forecast basketball teams' qualification for playoffs over a 10-season dataset.
- Conducted exploratory data analysis, revealing insights into teams, coaches, and player performance metrics.
- Implemented feature engineering and utilized regression models, such as Random Forest Regressor and Lasso Regression, for player and team performance predictions.
- Employed Stratified K Folding methodology and lagged features for more realistic model training and evaluation.
- Successfully achieved an accuracy of nearly 85% in predicting playoff-qualified teams using the Lasso Regression model with no scaler.

STCP Routing System | *C++* Sep 2021 – Dec 2021

- Developed a comprehensive public transportation assistance system for Porto, utilizing real data from Sociedade de Transportes Colectivos do Porto (STCP).
- Implemented various route optimization algorithms, including breadth-first search and Dijkstra's algorithm, considering factors such as minimum zone changes, distance, line changes, and stops.
- Successfully parsed and processed data from STCP's CSV files, creating an efficient graph representation to model the bus network, incorporating daytime and nighttime travel considerations.
- Enhanced functionality with features such as dynamic handling of daytime and nighttime travel, minimum spanning tree calculation, and user-friendly input options for flexible route planning.

Technical Skills

Languages: Python, JavaScript, HTML/CSS, SQL (Postgres, SQLite), Java, C++/C, PHP, Bash/Shell
Frameworks: Flask, Django, React/React-Native, Next.js, .NET, Laravel, FastAPI
Developer Tools: Git, Docker, npm, Pip, Homebrew, Make, Visual Studio Code, IntelliJ IDEA, PyCharm, Jupyter Notebook, pgAdmin
Libraries: pandas, NumPy, Scikit-Learn, Matplotlib

Other

Languages: English, Portuguese
Certificates: Cambridge Advanced English - 2019 (Level B - C1), Driver's License
Volunteering: Espaço Raiz