https://github.com/pedro15sousa

Pedro Sousa

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Education

Manchester, UK **University of Manchester** **Fall 2019 – July 2023**

- **Major:** Bsc in Computer Science and Mathematics with Industrial Experience, First Year Mark: First Honours (86/100)
- **Programming Coursework:** Programming 1 (Python), Programming 2 (Java), Algorithms and Data Structures, Data Science, Machine Learning, First Year Project (Web Application)
- **Mathematics Coursework:** Calculus, Linear Algebra, Introduction to Pure Mathematics, Financial Mathematics, Probability 1, Numerical Analysis
- **High School:** Science and Technology, Final Mark: 19/20

Employment

Head of Technology **FutureLeaderX (start-up)** **2020-Present**

- Website designer, in charge of all information and technology functions of a student led start-up.
- Responsible for enhancing the company's digital presence by making the leap from social media to a full spectrum web application and for reaching out to prospect guests to our company based podcast.

Student Ambassador **University of Manchester** **Fall 2019–Present**

- Leading and organizing university tours for prospect students and parents and provide them with insight on academic life.

Personal Projects

- **Smart Brain** (Present). Project created during web development online course. All the skills learned were applied in the creation of this web application focused on using machine learning to identify faces in images that the user uploads. First time creating a full stack product, including front-end (React.js), Back-end (Node.js, Express.js), Database (Postgresql) and API (Clarifai).
- **Maze Solver** (2020). Programming 2 coursework. Grade achieved: 97/100. Java based application that receives a .txt file as a maze and renders it into a visual application. The user can choose to 'Step' through the maze or to be presented with final solution. An algorithm was created to solve mazes of different layouts. Extra feature implemented to receive the size as an input and randomly creates and displays a solvable maze accordingly. Save and Load options incorporated.
- **Spam Filter** Data Science coursework. Grade achieved: 18/20. Used Jupyter Notebooks and Python to create a spam filter. An example data set was provided. Worked with the pandas library to analyse and manipulate the data. Machine learning methods and probability functions were used to make the agent distinguish spam messages from ham messages.
- **Chess Game** (2020). Programming 2 coursework. Grade achieved: 100/100. Terminal based chess game created in Java. Requires two players. Side project: used the same structure to create the game in Python and developing a neural network to serve as one of the players.
- **Retro Snake Game** (2019). Created a retro Snake Game with a graphical interface in Python using Tkinter as the GUI library.

Additional Experience and Awards

- **Merit Award for the Best Student of the City of Abrantes** (2019) Awarded in acknowledgment to my academic achievements throughout High School.
- **Best Mathematics Student Award** (2019) In honor to the 100 years of history of the firm SILVARICO, LDA.
- **NOVA University of Lisbon Summer Course** (2018) Spent two weeks working in a team project focused on Neural Networks using Python (NumPy). Final product was a character and audio recognition software.

Languages and Technologies

- Python (NumPy, Pandas, SciPy); Java; JavaScrip (REACT.js, Node.js); HTML and CSS; Bootstrap; PostgreSQL; Git;