João Marinho

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🔗 joaoamarinho   ⭕ JoaoAMarinho

Work Experience

▶ **Critical Techworks**   Lisbon, Portugal
Autonomous Driving Software Engineer   *Dec. 2024 - Present*
> Researched and implemented autonomous vehicle control algorithms, including PID and MPC controllers.
> Developed custom communication protocols using ROS nodes.
> Competed in the FS-AI class at the Formula Student UK competition, contributing to the team's victory in the FS-AI Business Presentation Award.
> <u>Skills</u>: C++, Sofwtare Testing & Development, Scrum, Teamwork.

▶ **Continental Engineering Services, Ltd.**   Porto, Portugal
Software Engineer   *Mar. 2022 – Jul. 2022*
> Evaluated the performance of a Reinforcement Learning model for HVAC systems, using Python to assess efficiency.
> Designed and implemented performance metrics and visualisation tools for tracking and analysing model outcomes.
> Proposed enhancements to the decision tree process, resulting in the selection of the most effective model version.
> <u>Skills</u>: Python, Machine Learning, Performance Testing, Data Visualisation, Reinforcement Learning.

▶ **Formula Student FEUP**   Porto, Portugal
Driverless Team Member   *Oct. 2022 – Sept. 2023*
> Researched and implemented autonomous vehicle control algorithms, including PID and MPC controllers.
> Developed custom communication protocols using ROS nodes.
> Competed in the FS-AI class at the Formula Student UK competition, contributing to the team's victory in the FS-AI Business Presentation Award.
> <u>Skills</u>: Autonomous Vehicles, ROS, C++, Python, Linux, Teamwork, Time Management.

▶ **Faculty of Engineering, University of Porto**   Porto, Portugal
Teaching Assistant   *Oct. 2022 – Sept. 2023*
> Improved the automated exam and quiz correction process for the Functional and Logic Programming course.
> Implemented new pattern detection algorithms, leading to better feedback for students and more accurate outlier detection.
> Reorganised results into structured file formats, streamlining data management and facilitating easier analysis.
> <u>Skills</u>: Automation, Data Analysis, Pattern Recognition, Teaching Assistance.

Education

▶ **Faculty of Engineering, University of Porto**   Porto, Portugal
M.Sc. in Informatics and Computing Engineering   *Sept. 2019 – Jul. 2024*

▶ **Chalmers University of Technology**   Gothenburg, Sweden
Erasmus+ Program   *Aug. 2023 – Jan. 2024*

▶ **Music Academy Viana do Castelo**   Viana do Castelo, Portugal
Double Bass Basic Music Course   *2012 – 2016*

Skills

Programming Languages:	C/C++, Python (PyTorch, numpy, pandas, scikit-learn), JavaScript
Tools:	Git, ROS, Linux, Docker
Fields:	Software Engineering, Autonomous Systems
Languages:	Portuguese (Native), English (C1 Advanced - Cambridge Certificate), Spanish (Conversational)

Interests

Areas:	Problem Solving; Autonomous Vehicles; Machine Learning; Crossfit/Sports