JOSÉ ALEIXO CRUZ

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EDUCATION

Faculty of Engineering of the University of Porto   September 2019 - Present
Doctoral Program in Informatics Engineering   *Porto, Portugal*

· Research area: Safe and Robust Reinforcement Learning

Faculty of Engineering of the University of Porto   September 2014 - July 2019
BSc+MSc in Software Engineering and Computer Science   *Porto, Portugal*

· Relevant courses: Software Engineering, Agents and Distributed Artificial Intelligence, Modelling and Simulation.
· Exchange student in Zilina, Slovakia for six months. Relevant courses: Neural Networks, Cryptography.
· Master's Thesis: developed OpenAI Gym compatible reinforcement learning environment and agent to negotiate in a simulation of the Diplomacy board game.

EXPERIENCE

LIACC - Artificial Intelligence and Computer Science Laboratory   Septmeber 2019 - Present
Research Fellow - Machine Learning   *Porto, Portugal*

· Currently developing a computer vision and machine learning pipeline to gather relevant environment and action data from monocular video to develop a pedestrian behavior model using inverse reinforcement learning.
· Built a reinforcement learning environment in Unity for training simulated pedestrians to navigate in an urban scenario.

ComplyAdvantage   June 2018 - September 2018
DevOps Intern   *London, United Kingdom*

· Maintained and monitored staging and production environments on AWS, developing new infrastructure that contributed to security improvement and downtime reduction.
· Improved pipeline automation and provisioning using Docker, GitLab, Terraform, Packer, Salt, Ansible, Spinnaker and SonarQube, resulting in a more fluid deploying process.
· Created a Slack bot which facilitated the creation and fulfillment of JIRA tickets related to infrastructure issues.

Junior Company JuniFEUP   October 2016 - May 2018
Junior Developer   *Porto, Portugal*

· Co-developed the first FEUP Career Fair application for Android.
· Built CMS and front-end for the website of a company using Node.js libraries.

HIGHLIGHTED PUBLICATIONS

· **Cruz J.A.**, Cardoso H.L., Reis L.P., Sousa J. (2020) "*Reinforcement Learning in Navigation and Cooperative Mapping*". In 2020 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC).
· **Cruz J.A.** (2020) "*Analyzing the Credit-Assignment Problem in Deep Reinforcement Learning*". In 15th Doctoral Symposium in Informatics Engineering (DSIE 20).
· Cruz D., **Cruz J.A.**, Cardoso H.L. (2019) "*Reinforcement Learning in Multi-Agent Games: Open AI Gym Diplomacy Environment*". In Progress in Artificial Intelligence: 19th EPIA Conference on Artificial Intelligence (EPIA 2019).
· Duque D., **Cruz J.A.**, Cardoso H.L., Oliveira E. (2018) "*Optimizing Meta-heuristics for the Time-Dependent TSP Applied to Air Travels*". IN IDEAL 2018. Lecture Notes in Computer Science, vol 11314. Springer, Cham

RELEVANT SKILLS

Programming Languages	Python, Java, Bash, C++, JavaScript
Software & Tools	TensorFlow, Keras, OpenCV, Docker, GitLab CI/CD
Languages	Portuguese (native), English (C2), German (A1)

AWARDED PROJECTS

· Diagramo: custom diagram specification language and interactive online editor to create diagrams with code (Make or Break 2018 hackathon winner - creative category).