ANDRÉ CARDOSO

Software Engineer

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EXPERIENCE

Summer Internship

Volper

July 2022 - September 2022

- Performed a retrofit on a **CNC machine**, integrating a new **electrical** system comprising drivers and controllers.
- I have worked extensively with diverse **sensory equipment** incorporated in the industry. I have also programmed **robots** deployed in packaging environments.

Summer Internship

Renault - Cacia

July 2021 - September 2021

- I designed and developed a **database** system to manage substitution parts for assembly line machinery effectively. The database included a registry that documents the replacement dates of parts and tracks the current inventory levels.

PROJECTS

Research Fellow / Dissertation

Laboratory of Automation and Robotics | University of Aveiro

February 2023 - Present

- Implementation of a sophisticated **sunlight variation algorithm** in a data-driven simulator.
- Integration of a cutting-edge **object variation algorithm** into the data-driven simulator.
- The proposed method in **scene augmentation** significantly enhances our models' ability to generalize to previously unseen data.

Machine Learning / Electrical Engineer

Automec | University of Aveiro

September 2021 - Present

- Implementation of multiple **neural networks** utilizing the **PyTorch** framework to control a car in autonomous vehicle technology.
- Development and fabrication of a high-quality **PCB** equipped with comprehensive power distribution and low-level control mechanisms.

Pytorch / ROS / Open3D

Dora the Mug Finder

December 2022 – February 2023

- The utilization of advanced **point cloud processing** techniques to extract objects from complex three-dimensional scenes.
- Employing a state-of-the-art deep **neural network** for object classification in the scene camera.
- Utilizing **ROS** as the underlying framework for project development facilitated seamless collaboration and interoperability.

EDUCAÇÃO

Mestrado em Engenharia Mecânica

Universidade de Aveiro

Setembro 2018 – Junho 2023

Especialização: Visão por Computador, Robótica e Deep Learning

Mestrado em Engenharia Mecânica e Robótica

Erasmus AGH University of Science and Technology

Fevereiro 2022 – Julho 2022

SKILLS

PLC | Robotics | Vision | Eplan | CNC (Fagor) | Python | Javascript / React | Machine Learning | OpenCV | ROS | Pytorch | Docker | MongoDB

FORMAÇÃO

- Programação de PLCs
- Projeto elétrico
- Programação Orientada a Objetos
- Modelação 3D
- Impressão 3D
- Inteligência Artificial

CONQUISTAS

- Venci a fase local da EBEC 2021 e 2023 (European BEST Engineering Competition) na modalidade de **Design Inovador**.