

Eduardo Moura Cirilo Rocha

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EXPERIENCE

Robotics Software Engineer

RFA Engineering – under contract to John Deere ISG

Jan 2020 – present Berkeley, CA

Designed data pipelines for stereo image acquisition and logging. Deployed Deep Learning models to embedded hardware. Developed applications in a continuous integration environment. (C++, C, Python, Jenkins, Artifactory, Docker)

Research Assistant

University of Wisconsin-Madison

Jan 2018 – Dec 2019 Madison, WI

Designed a new method to assess corn silage quality via image analysis and Deep Learning. Designed custom camera systems for data acquisition. (Python, TensorFlow, GCP, R)

Product Engineering Intern

John Deere Intelligent Solutions Group Automation Delivery Organization

May 2019 – Aug 2019 Des Moines, IA

Used Computer Vision and Deep Learning techniques for Image Classification and Semantic Segmentation (Python, C++, OpenCV, Tensorflow, Sklearn). Implemented robotic arm control and object detection using stereo cameras (Python, C, OpenCV, Classical Controls).

Mechatronics Laboratory Intern

University of Wisconsin-Madison

May 2016 – Aug 2016 Madison, WI

Designed and fabricated an injection pump for use in 4D Neuroangiography (PLC, CNC machining, 3D scanning/printing, Classical Controls).

Lab Assistant

Laboratory of Aerial Robotics, Universidade de Brasilia

Mar 2014 – July 2017 Brasília, Brazil

Designed and assembled autonomous unmanned aerial vehicles. Implemented algorithms for cooperative control of multiple aircraft (System design, Matlab, Simulink).

PROJECTS

Research Project: SilageSnap Application [[App link](#)]

Developed a mobile application capable to assess corn kernel particle size distribution in water separated corn silage using image analysis (C++, OpenCV, Swift).

Social Extension Project/Competition Team: UnBeatables

Developed behavioral algorithms for autonomous humanoid robots control in robotic soccer competitions. Trained Deep Learning models for object detection (C++, TensorFlow, OpenCV).

Competition Team: Draco Volans Aerodesign

Developed algorithms for structural optimization and simulation of aircraft. (C, Matlab, Ansys).

SKILLS

C/C++ Python Tensorflow/Keras
OpenCV Matlab R git Docker
Unix systems GCP VS

Portuguese, English
Spanish, German
Polish



EDUCATION

M.S. Biological Systems Engineering

University of Wisconsin-Madison

Jan 2018 – Dec 2019

- Focused on agricultural automation, Machine Learning, and Modern Controls.
- [[Thesis and publications](#)]

B.S. Mechatronics Engineering

Universidade de Brasília, Brazil

University of Wisconsin-Madison

Aug 2012 – Dec 2017

- Graduated first in a class of 40.
- Brazil Scientific Mobility Program fully-funded scholarship recipient.
- VISP Academic Excellence Award recipient, Fall 2015, University of Wisconsin-Madison.

FURTHER EDUCATION

deeplearning.ai (Coursera) 2019
TensorFlow in Practice Specialization

LinkedIn Learning 2020
C++: Advanced Topics
Test-Driven Development in C++
DevOps Foundations: Continuous Delivery /Continuous Integration

EXTRACURRICULAR ACTIVITIES

- Data Structures and Digital Circuits teaching assistant, Universidade de Brasília (Mar 2014 – July 2015)
- Speaker of International Reach Cross-Cultural Speakers Program, UW-Madison (Sep 2015 – Aug 2016)
- Portuguese tutor in the program Greater University Tutoring Service, UW-Madison (Jan 2016 – Aug 2016)