

# António Morais

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## OBJECTIVE

Graduate student looking for work opportunities in the field of Computer Vision.

## CORE SKILLS

Python (5 years), C (4 years), C++ (1 year), PyTorch (1 year), OpenCV (1 year)

## EDUCATION

### University of Coimbra

*Master's in Computer Science, Intelligent Systems*

Coimbra, Portugal  
September, 2019 – September, 2021

### University of Coimbra

*Bachelor's in Computer Science*

Coimbra, Portugal  
September, 2016 – July, 2019

## WORK EXPERIENCE

### University of Coimbra

*Student Researcher*

Coimbra, Portugal  
February, 2021 – September, 2021

Researching ways to improve the fault-tolerance of CNNs in safety-critical systems

- Implementing and modifying CNN models for Image Classification in **C++** using **PyTorch** and **CUDA** in **Linux**
- Image preprocessing with **OpenCV** in C++ and Python
- Part of the AI4EU project (<https://www.ai4eu.eu/>)

### CISUC - Centre for Informatics and Systems of the University of Coimbra

*Student Researcher*

Coimbra, Portugal  
October, 2020 – December, 2020

Improved explainability of an Object Detection model used to detect and prevent the spread of forest fires

- Modified the source code (**C**) of the **Darknet** framework in order to use it with an Explainable AI library in **Python** (LIME)
- Used **Jupyter Notebook** in Linux to preprocess images (OpenCV), to train and test the models using CUDA, and to create functions that integrate Darknet with LIME
- Source code and examples available at <https://github.com/AntMorais/yolime>

### University of Coimbra

*Student Researcher*

Coimbra, Portugal  
April, 2020 – September, 2020

Worked as a Full Stack developer for a web app that evaluates student's understanding of the lecture material during class

- Data visualization in Python using Dash, Matplotlib, Numpy and Pandas
- Back end programming using Python, Requests and Docker

### Bosch Portugal

*Summer intern*

Ovar, Portugal  
August, 2019

Full Stack development of a web app that allows users of Azure DevOps to manage templates and apply them to existing work items

- Front end using Bootstrap, HTML+CSS, JavaScript and JQuery
- Back end with Flask, Python and Azure DevOps API

## OTHER SKILLS

**Data Science:** Geopandas, Keras, MATLAB, PySpark, R, Scikit-learn, Scipy, TensorFlow

**Databases:** ArangoDB, MySQL, Neo4j, PostgreSQL

**Languages:** Portuguese (Native), English (C2 Proficiency), French (A1)