

# TIAGO ALMEIDA

Mechanical Engineer ◇ ORCID: 0000-0001-9059-6175

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29 May, 1996 ◇ Portugal

## ABOUT ME

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I'm a mechanical engineer who has been motivated by Robotics and Computer Vision since my Master's Degree. After that, I've been developing some very important hard skills to deploy applications in those fields, such as studying the Computer Science basis in the Deep Learning domain and learning frameworks (e.g. TensorFlow and PyTorch) that enable apply this AI subsets in practice. Besides the complexity and outstanding results that has shown, characteristics that I appreciate, Deep Learning has the capability to change the current world paradigm and I want to be part of this. Apart from the work, I love to travel and get involved with different cultures, that's why I've been travelling to other countries at least once a year. In addition, I like to develop and deploy my homemade projects related to the areas where I am currently working at.

## EDUCATION

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**University of Aveiro, Portugal**

*Sep 2014 - July 2019*

Master in Mechanical Engineering - GPA: 16/20

## SPECIALIZATIONS

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**CS50 from Harvard University**

*Jun 2020*

CS50x

**NVIDIA**

*Mar 2020*

Getting started with Deepstream for video analytics on Jetson Nano

**Coursera**

*Dec 2019 - Feb 2020*

Deep Learning Specialization

TensorFlow in Practice Specialization

Applied Machine Learning in Python Course

Applied Plotting, Charting & Data Representation in Python

Introduction to Data Science in Python

**Wall Street English, Aveiro, Portugal**

*Sep 2017 - Sep 2019*

First Certificate in English - B2

## WORK EXPERIENCE

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**University of Aveiro, Portugal**

*Sep 2019 - Present*

Research Fellow

T.6.3.3 - Development of a flexible and low-cost localization and navigation system for PPS6 of the Produtech II SIF 24541 project.

**Avesteel, Aveiro, Portugal**

*Aug 2016*

Mechanical Locksmith Assistant

Temporary job in Renault Cacia to improve some practical hard skills. My task was to dismantle and clean engines from machines.

## INTERNSHIPS

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### Renault Cacia, Aveiro, Portugal

*Jul 2018 - Aug 2018*

Mechanical Engineer

Implementation of an artificial vision station on a production line to control the components quality.  
The software used was Sherlock.

## PROJECTS

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### Multi-Camera and Multi-Algorithm Architecture for Visual Perception onboard the AT-LASCAR2

Master's Thesis (Advisor: Prof. Vítor Santos) - Score 19/20

**Personal Website:** <https://tmralmeida.github.io/projects/index.html>

## PUBLICATIONS

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Almeida T., Lourenço B., Santos V., "Road detection based on simultaneous deep learning approaches", In: Robotics and Autonomous Systems. 2020, doi: <https://doi.org/10.1016/j.robot.2020.103605>, ISSN: 0921-8890

Almeida T., Santos V., Lourenço B., Fonseca P., "Detection of Data Matrix Encoded Landmarks in Unstructured Environments using Deep Learning." 2020 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC), Ponta Delgada, Portugal, 2020, pp. 74-80, doi: 10.1109/ICARSC49921.2020.9096211

Almeida T., Santos V., Lourenço B. (2020) "Scalable ROS-Based Architecture to Merge Multi-source Lane Detection Algorithms." In: Silva M., Luís Lima J., Reis L., Sanfeliu A., Tardioli D. (eds) Robot 2019: Fourth Iberian Robotics Conference. ROBOT 2019. Advances in Intelligent Systems and Computing, vol 1092. Springer, doi: [https://doi.org/10.1007/978-3-030-35990-4\\_20](https://doi.org/10.1007/978-3-030-35990-4_20)

## PARTICIPATION IN CONFERENCES

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### ICARSC2020

*April 2020*

Presentation of the paper "Detection of Data Matrix Encoded Landmarks in Unstructured Environments using Deep Learning"

### Fourth Iberian Robotics Conference - Autonomous Driving and Driver Assistance Systems (Special Session)

*Nov 2019*

Presentation of the paper "Scalable ROS-Based Architecture to Merge Multi-source Lane Detection Algorithms"

## RELEVANT TECHNICAL SKILLS

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<b>Languages</b>	Portuguese, English
<b>Programming Languages</b>	C/C++, Python, Matlab, JavaScript
<b>Libraries / Frameworks</b>	OpenCV, numpy, ROS, Pytorch
<b>Tooling</b>	Latex, Solidworks, Onshape, VSCode, Git
<b>OS</b>	Linux, Windows

## EXTRA-CURRICULAR

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Think Twice 40 hours programming *2020*

Monitor at UA Summer School (Laboratory of Automation and Robotics) *2019*

Sunset Hackathon Participation *2018, 2019*

EBEC Participation *2018, 2019*

4th. place in the ABC-impressão a 3D competition	<i>2016</i>
ABC Chain Reaction Participation	<i>2015</i>
Football player at the A.D. Taboeira	<i>2004-2012</i>