

# João Cartucho

✉ to.cartucho@gmail.com  
🐙 github.com/Cartucho  
🌐 linkedin.com/in/cartucho

## EDUCATION

### **Carnegie Mellon University**

Pittsburgh, PA, USA

Visiting Scholar, Machine Learning

### **Instituto Superior Técnico**

Lisbon, Portugal

Aerospace Engineering

Expected Grad. May 2018

### **Politecnico di Torino**

Torino, Italy

Erasmus in Computer Science

## SKILLS

### **Languages:**

Portuguese, Italian, English

### **Programming:**

C, C++, Python, Java, Matlab, SQL

### **Software:**

Git, OpenCV, ROS, CMake, Android

## COURSEWORK

Algorithms

Artificial Intelligence

Autonomous Systems

Computer Vision

Data Structure

## AWARDS

Academic Merit Diploma

FCT Scholarship

2nd place CMU's Annual Hackathon

## REFERENCES

### **Manuela Veloso**

Machine Learning Department

School of Computer Science

Carnegie Mellon University

mmv@cs.cmu.edu

### **Vincent Rabaud**

Google Inc., Senior Software Engineer

OpenCV Foundation, Co-founder

vincent.rabaud@gmail.com

02.01.2018

## EXPERIENCE

### **CMU CORAL Lab**

Visiting Scholar

Oct 2017 – Dec 2017

Pittsburgh, PA

- I had the opportunity of working with real robots such as CoBots ( Collaborative roBots ), and Pepper ( from SoftBank Robotics ).
- Introduced an algorithm in which robots proactively learn new objects by asking for help from humans in the environment.

### **Google Summer of Code**

2016 and 2017

I added to OpenCV:

- Tools for Multi-language tutorials;
- Function/method prototypes for the Python bindings;
- Python code Tests (using Pylint);
- Java compiling Tests (using Apache Ant);
- HighGui module in Java;
- 15 updated tutorials (including Java and Python codes).

## PROJECTS

### **Drone Localization**

Course: Autonomous Systems | Grade 0-20 : 19 ( best in class )

Real-time pose estimation (position + orientation) using data from aerial images.

### **Fingerprint Badging System**

Course: Project & Lab on Communication Systems | Grade 0-30 : 30L ( best )

A badging system device that allows companies to manage level of access, time and attendance tracking.

### **Handwriting Digit Recognition**

Course: Computer Vision | Grade 0-5 : 5 ( best )

An app that recognizes handwritten digits in a photo.

## PUBLICATIONS

### **Towards a Robust Interactive and Learning Social Robot**

Accepted to AAMAS 2018.

Michiel de Jong, Kevin Zhang, Travers Rhodes, Aaron Roth, Robin Schmucker, Chenghui Zhou, Sofia Ferreira, João Cartucho, Manuela Veloso.

## VOLUNTEERING

### **StackOverflow**

Over 200,000 people reached.

### **Youth Exchanges in:**

Italy, Portugal, Turkey, Greece, Romania, Netherlands, Finland.