

JOÃO CARTUCHO

Personal Information

Nº7 R/C Dto, Rua Filinto Elísio, 1300-241, Lisbon, Portugal

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Education

POLITECNICO DI TORINO

Torino, TO, ITALY

09/2015–08/2016

Abroad as an Erasmus student in Computer Science Courses.

- Sorting algorithms
- Complex data structures and ADTs (linked lists, queues, stacks, heaps, trees, hash tables and graphs) and related algorithms
- Ability to evaluate algorithm complexity and improve efficiency in terms of execution time and/or memory use
- Linear programming, exact and heuristic Optimization methods, Network flow problems
- Strategies for problem solving, Logic, Knowledge representation, Deep Learning, Pattern Recognition, Neural Networks
- Computer Vision, Software Engineering, Game Development, Ambient Intelligence and Communication Systems

INSTITUTO SUPERIOR TÉCNICO, LISBON

Lisbon, LIS, PORTUGAL

09/2013–now

(planned) M.S. in Aero-Space Engineering.

Expected graduation date: 12, 2017

Current Master's Average (0-20): 17.44

- Cutting-edge technologies, which are materialized into airplanes, helicopters, robotized aircrafts, spaceships and satellites.
- All stages of the life-cycle of a vehicle, from its conception and project, to the operation and maintenance, tests and production.

UNIVERSITY ENTRANCE EXAMINATION

PORTUGAL

National Exams (final grade 0-20):

- Mathematics A: 18.1
- Physics and Chemistry: 19.8

Internship Experience

GOOGLE SUMMER OF CODE 2016

Torino, Italy

05/2016–08/2016

Multi-language OpenCV Tutorials in Python, C++ and Java

- OpenCV is an open source image processing library extensively used in C++, Python, Java and more than 15 other languages. With the big variety of supported languages appeared the difficulty to find a tutorial in an appropriate language and to write one without duplicating effort or maintenance. In this project we added the possibility to

write multi-language tutorials that a user can dynamically change to its preferred language if available. We unified some existing tutorials and provided an infrastructure for checking the validity of the code used in tutorials. In the end, tutorials became easier to write, well split between code and meta-data, and most importantly, more valid and language friendly for the user.

Project Activities

FINGERPRINT BADGING SYSTEM Torino, Italy
02/2016–07/2016

Course: Project and Laboratory on Communication Systems.

Developing a Badging System Device using .NET Gadgeteer FEZ Spider Kit from GHI Electronics.

Final grade 0-30 : 30L (excellent)

HANDWRITING DIGIT RECOGNITION Torino, Italy
09/2015–07/2016

Course: Computer Vision.

Developing Software to recognize handwritten digits in a photo.

Final Project grade 0-5 : 5

CLUSTERING ALGORITHM OF VECTOR QUANTIZATION Torino, Italy
09/2015–07/2016

Course: Artificial intelligence.

Clustering the MNIST 10-digit set database, obtaining a final error of 4.8% using a 10 minutes computation over the 60K-digits set.

Final grade 0-30 : 27

Skills Programming Languages: C (grade 19/20), C++, C#, Java (grade 30/30), Matlab, Python, HTML, Javascript, jQuery
Extra Interests: OpenCV, CPLEX, Solid Works, Photoshop, Sony Vegas, Micro Framework.NET, ROS, Adobe Illustrator, Unity
Languages: Portuguese (native), English (fluent) - Cambridge ESOL - FCE, Italian (fluent), Spanish (beginner)

References **Vincent Rabaud**
Google Inc., senior software engineer
OpenCV Foundation, co-founder
vincent.rabaud@gmail.com

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