# Guim Perarnau

**Actively seeking opportunities within research engineering**

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## Education

M.Sc. in Computer Vision. Grade: 9.11/10

**Autonomous University of Barcelona**

Sept 2015 – Sept 2016  Barcelona, Spain

Graduated second in the class with 4 honors in:

- Visual recognition
- Video analysis
- Machine learning
- Research dissemination

B.Sc. in Computer Science. Grade: 9.08/10

**Autonomous University of Barcelona**

Sept 2011 – June 2015  Barcelona, Spain

Graduated first in the class with 25 honors, including:

- Machine learning
- Analysis and design of algorithms
- High performance computing
- Artificial intelligence
- Computer vision
- Statistics

## Honors & awards

**Best final master dissertation** — **M.Sc. in CV, Sept 2016**
Invertible Conditional GANs: change attributes of your face (e.g. modify gender) using neural nets. Lua (+Torch). Grade: 10/10
Code available at `https://github.com/Guim3/IcGAN`

**Top 5 highest academic performance** — **M.Sc. in CV, Sept 2016**
2nd position among 29 students.

**Best final degree project** — **B.Sc. in CS, Dec 2015**
Map generation based on images taken with a UAV. MATLAB. Grade: 9.9/10.

**Highest academic performance** — **B.Sc. in CS, Dec 2015**
Graduated first of a class of 89 students.

**Collaboration scolarship** — **Nov 2014 – Feb 2015**
A contribution of 2000€ to work on research for a total amount of 450 hours. Given to students with the highest academic grades.

## Experience

Intern student

**Computer Vision Center**

Sept 2014 – June 2015  Barcelona, Spain

- Developed from scratch a hand detector on a budget RGB camera using machine learning techniques. Obtained an accuracy of 97.44% (windows-based). MATLAB, Python.
- Designed a pattern code identifier on ID cards with a 97.15% of accuracy. MATLAB.
- Created a music symbol classifier as a first step to read handwritten music sheets. It successfully identifies 31 different symbols with an accuracy of 91.58%. MATLAB.

## Summary

*Recently graduated with honors and focused on the design of machine learning solutions. Seeking opportunities to enhance my skill set on deep learning engineering.*

## Publications

### Conference Proceedings

- Perarnau, Guim et al. (2016). "Invertible Conditional GANs for image editing". In: *NIPS Workshop on Adversarial Training*.

## Projects

Traffic sign detector

**M.Sc. project**

Sept 2015 – Feb 2016

Built a detector using machine learning techniques able to classify 15 traffic signs in real time with 81.05% precision. Python.

Optimizing neural network training

**B.Sc. project**

Dec 2014 – Jan 2015

Optimized the forward and backpropagation step of an existing neural net implementation, improving its speed by 291%. C (+OpenMP).

## Technical skills

Computer vision | Machine / deep learning | High performance computing

Python | Lua (+Torch) | MATLAB | C (+OpenMP) | LaTeX

## Languages

**English: C1 level**

**Spanish: native**

**Catalan: native**