

EDGAR RIBA

Education	UNIVERSITAT AUTONOMA DE BARCELONA	Barcelona, Spain
	10/2015–now	
	Ph.D. in Computer Science Dissertation: <i>Computer Vision Techniques in Very High Resolution Remote Sensing</i> . Advisor: Daniel Ponsa. Research Topics: Deep Learning, Local Features, Camera Pose Estimation.	
	UNIVERSITAT POLITECNICA DE CATALUNYA	Barcelona, Spain
	07/2012–06/2015	
	M.S. in Automatic Control and Robotics. Dissertation: <i>Implementation of a 3D pose estimation algorithm</i> . Advisors: Adrian Penate and Francesc Moreno-Noguer.	
	UNIVERSITAT POLITECNICA DE CATALUNYA	Barcelona, Spain
	07/2008–06/2012	
	B.S. in Geomatic and Surveying Engineering.	

Work Experience

COMPUTER VISION CENTER	Barcelona, Spain
10/2015–now	
PhD candidate, Advanced Driver Assistance Systems group	
<ul style="list-style-type: none">working on deep learning algorithms to solve problems related to local features and camera pose estimation.	
OPENCV	online
05/2016–08/2016	
Intern, Google Summer of Code	
<ul style="list-style-type: none">integrated tiny-dnn to OpenCV contrib by adding a wrapper to the caffe converter.fixed bugs in tiny-dnn and developed several new features such as GPU support via OpenCL and NNPACK optimizations.	
OPENCV	online
05/2015–08/2015	
Intern, Google Summer of Code	
<ul style="list-style-type: none">developed the Structure From Motion module using a customized version of Libmv.	
ALDEBARAN ROBOTICS	Paris, France
02/2015–06/2015	
Intern Software Engineer, Perception team	
<ul style="list-style-type: none">designed and implemented an algorithm for people detection and tracking by sensor fusion using ROS, OpenCV and C++.	
OPENCV	online
05/2014–08/2014	
Intern, Google Summer of Code	
<ul style="list-style-type: none">designed and implemented a real time pose estimation algorithm for textured objects.implemented the PnP method: <i>A direct least-squares</i> (DLS) in the calib3d module.contributed with a tutorial for the calib3d module.	

INSTITUT DE ROBOTICA I INFORMATICA INDUSTRIAL (CSIC-UPC)
Barcelona, Spain

05/2014–08/2014

Research Assistant, Perception and Manipulation group

- worked on my masters thesis in geometric computer vision.

Teaching Experience

UNIVERSITAT POLITECNICA DE CATALUNYA Barcelona, Spain

310209, *Electromagnetism and Optics*, Fall 2007: Teaching Assistant

310209, *Electromagnetism and Optics*, Spring 2007: Teaching Assistant

UNIVERSITAT AUTONOMA DE BARCELONA Barcelona, Spain

102708, *Software Engineering I*, Spring 2016: Teaching Assistant

Professional Activities

Google Summer of Code student for OpenCV from 2014 to 2016.

Maintainer/developer of the tiny-dnn library involved in the core development and design, bug fixes and code review.

Contributed in many Open Source projects such as OpenCV, ROS, Object Recognition Kitchen, OpenDroneMap and OpenSfM.

Participated in robotics competitions and campus such as the HUMABOT Robot Competition 2014 during the *IEEE-RAS International Conference on Humanoid Robots* (Madrid, Spain) and the RoCKIn Camp 2014 organized by La Sapienza University of Rome (Rome, Italy) within the company PAL Robotics.

Co-founder and member of the *La Konfraria de la Vila del Pingui*. An Open Source community, organizing local events and workshops spreading the free software culture.

Skills

Competence: Computer Vision (local features, camera pose estimation), Deep Learning, Robotics, Programming.

Programming Languages: C++, Python.

Programming Libraries: Tensorflow, tiny-dnn, OpenCV, ROS.

Extra Interests: Git, CMake, OpenCL, Octave/Matlab, Boost, Android.

Languages: Catalan (native), Spanish (native), English (professional)

Software

tiny-dnn: header only, dependency-free deep learning framework in C++11.

Papers in Reviewed Proceedings

V. Balntas, E. Riba, D. Ponsa, K. Mikolajczyk, “Learning local feature descriptors with triplets and shallow convolutional neural networks”, **BMVC**, 2016.

Relevant Coursework

- *Object Detection* (Free online course, Universitat Autònoma de Barcelona. Fall 2015)

- *Machine Learning* (Free online course, Stanford. Fall 2014)

- *Introduction to Robot Operating System (ROS)* (Universitat Politècnica de Catalunya. Spring 2014)

References

Prof. Daniel Ponsa

Computer Vision Center, Universitat Autònoma de Barcelona.

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Dr. Vincent Rabaud

Google, Inc.

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Dr. Francesc Moreno-Noguer

Institut de Robotica i Informatica Industrial (CSIC-UPC)

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