Joan Massich

Research Engineer

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Born 15 March 1984

This is how I did it Anton. I never saved anything for the swim back. (Gattaca, 1997)

Experience

Nov. 2017 –

Research engineer, *Parietal - INRIA*, Paris-saclay.
Core developer of open-source scientific packages for neuro-physiological data in Python and C++. But I also contribute to other projects of the python scientific stack and teach software development and good practices in workshops and courses.

Dec. 2015 – Sep. 2016

Attaché temporaire d'enseignement et de recherche (ATER), *Le2i - Laboratorie Electronique, Informatique et Image UMR CNRS 6306 at IUT Dijon*, Dijon.
I taught Software Engineering, Web and mobile apps development, and architecture.

Dec. 2013 – Dec. 2015

Postdoctoral fellow, *Le2i - Laboratorie Electronique, Informatique et Image UMR CNRS 6306 at IUT Le Creusot* , Le Creusot.
My main focus was developing machine learning and segmentation methodologies for medical imaging and industry inspection applications. But I was heavily involved in two educative European projects: one defining directives for computer science curricula, and another project for scientific dissemination to bridge university with primary and secondary education.

June 2009 – Dec. 2013

Research assistant, *ViCOROB - Computer Vision and Robotics group at University of Girona; Applied Vision Laboratory (AVL) at Texas Tech University (TTU); Le2i - Laboratorie Electronique, Informatique et Image UMR CNRS 6306 at IUT Le Creusot* .
Aside of my PhD I was heavily involved in education, outreach and technology transfer projects: setup code quality assurance at associated labs, underwater robotics workshops for kids and enthusiasts, the coordination of First Lego League events, and some courses on software engineering and architecture.

Education

Oct. 2009 – Dec. 2013

PhD in Computer Vision.
Universitat de Girona, Girona, Catalonia.
Université de Bourgogne, Le Creusot, France.
title: Deformable object segmentation in ultra-sound images.
grade: Unanimity excellent with honors.

Sept. 2007 – June 2009

Erasmus Mundus Master Course on Computer Vision and Robotics (VI-BOT).
Heriot-Watt University, Edinburgh, Scothland.
Universitat de Girona, Girona, Catalonia.
Université de Bourgogne, Le Creusot, France.
Autonomous Robots, Fundamentals on Robotics, Visual Perception, Real-time Image Processing, Scene Segmentation and Interpretation, Software Engineering, Image processing, Digital Signal Processing, Data Mining and Machine Learning, Medical Imaging, Shape Recognition Statistics, Infrared Imagery, Image Analysis.
grade: 8.1 over 10

Sept. 2005 – Sept. 2007

Computer Science Engineering,
Universitat de Girona, Girona, Catalonia.
Software Engineering, Computer Networks, Compilers, Computer Architecture, Numeric Methods, Economy, Production Systems, Statistics, User Interfaces, Security, Operating Systems, VLSI Design, Artificial Intelligence, Electronics, Digital Circuits.
grade: 7.7 over 10

PhD Thesis

title | *Deformable object segmentation in ultra-sound images.*
supervisors | Dr. Joan Martí and Prof. Fabrice Meriaudeau
description | My thesis was devoted to automatic segmentation of breast lesions in ultrasound images, since this task is key for the development of robust CAD systems applied to this organ and image modality. The proposed segmentation strategy divides the images into small meaningful regions that are contiguous, and uses optimization to label them based on training data and regularization criteria.

Technical Skills

Languages | Python, C++, Matlab, Scratch
Technologies | Git, Travis, appveyor, cirlce, CMake, LaTeX, Vim, Emacs
Operating Sytem | Windows, Linux (Gentoo)

Publications

A total of 28 international publications with 280 citations combined according to google scholar and an h-factor of 10.

Languages

Catalan and Spanish (mother tongue), English (fluent), and French (spoken fluent and written business level)

Awards

Sept. 2018

Member of the team creator and promoter of underwater robotics workshop for kids, *awarded with the **Jaume Vicens Vives distinction for the quality of university pedagogy.***, Barcelona.

Feb. 2016

Best student paper award for, *Rastgoo et. al. "Classification of melanoma lesions using sparse coded features and random forests"*, Rome.

Member of the ViCOROB-UDG team: winner of the 2006 SAUC-E (Student Autonomous Underwater Challenge Europe) competition, London.