



Roberto Valle Fernández

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Curriculum Vitae

Education

Technical University of Madrid

PhD Programme in Artificial Intelligence

Thesis: Head pose estimation and facial landmarks localization.

Madrid, Spain

2015 - December 2019 (expected)

Rey Juan Carlos University

MSc in Computer Vision, 8.83/10

Thesis: Text detection and recognition in the wild.

Madrid, Spain

2011 - 2013

Rey Juan Carlos University

MSc in Computer Science and Engineering, 7.91/10

Thesis: Vehicles localization, license plate recognition and model identification.

Madrid, Spain

2009 - 2011

Rey Juan Carlos University

BSc in Computer Science, 7.19/10

Thesis: Vehicle model recognition.

Madrid, Spain

2006 - 2009

Scientific Publications

Anonymous submission

Roberto Valle, José M. Buenaposada, Luis Baumela

2019

International Conference on Computer Vision, ICCV 2019, Seoul, Korea (under review).

Cascade of CNNs for Robust Facial Landmarks Detection

Roberto Valle, José M. Buenaposada, Luis Baumela

2019

Pattern Recognition Letters, PRL 2019. Awarded Papers Special Section (under review).

Face Alignment using a 3D Deeply-initialized Ensemble of Regression Trees

Roberto Valle, José M. Buenaposada, Antonio Valdés, Luis Baumela

2019

Computer Vision and Image Understanding, CVIU 2019 (under review).

Facial Landmarks Detection Using a Cascade of Recombinator Networks

Pedro D. López, Roberto Valle, Luis Baumela

2018

23rd Iberoamerican Congress on Pattern Recognition, CIARP 2018, pp. 575-583, Madrid, Spain, November 19-22, 2018. IAPR Best Student Paper Award (https://github.com/bobetocalo/bobetocalo_ciarp18).

A Deeply-initialized Coarse-to-fine Ensemble of Regression Trees for Face Alignment

Roberto Valle, José M. Buenaposada, Antonio Valdés, Luis Baumela

2018

European Conference on Computer Vision, ECCV 2018, pp. 609-624, Munich, Germany, September 8-14, 2018 (https://github.com/bobetocalo/bobetocalo_eccv18).

Benchmarking Head Pose Estimation in-the-Wild

Elvira Amador, Roberto Valle, José M. Buenaposada, Luis Baumela

2017

22nd Iberoamerican Congress on Pattern Recognition, CIARP 2017, pp. 45-52, Valparaíso, Chile, November 7-10, 2017 (https://github.com/bobetocalo/bobetocalo_ciarp17).

Head Pose Estimation In-the-Wild Using a Random Forest

Roberto Valle, José M. Buenaposada, Antonio Valdés, Luis Baumela

2016

9th Conference on Articulated Motion and Deformable Objects, AMDO 2016, pp. 24-33, Palma de Mallorca, Spain, July 13-15, 2016 (https://github.com/bobetocalo/bobetocalo_amdo16).

Teaching Assistant

Reconocimiento de Formas

Prof. Luis Baumela

2017 - 2019

Spanish

Deep Learning

Prof. Luis Baumela

2017 - 2019

English

Languages

Spanish

Native proficiency

English

First Certificate in English (FCE), Cambridge ESOL

Scholarships Received

Menéndez Pelayo International University

Madrid, Spain

Intensive English language classes, Intermediate Level 2

2012 - 2014

Level B2 related to Common European Framework of Reference for learning languages.

Spanish Ministry of Education Scholarship

Manchester, England

Language course abroad for a minimum period of 3 weeks

2011

Research Areas

Technical University of Madrid

Perception for computers and robots group

2013 - 2019

Collaborator for the PCR group (<http://www.dia.fi.upm.es/~pcr>) interested in the following areas:

- Computer Vision
- Machine Learning
- Artificial Intelligence
- Deep Learning

Computer Skills

Operating Systems

Linux, Mac OS X, Windows, iOS, Android

Programming Languages

C/C++, Python, Octave/Matlab

Computer Vision Libraries

OpenCV, Tensorflow, Keras, Caffe, Boost, Scikit-Learn

Research Projects

Research HEIMDAL-UPM project (<http://www.geintra-uah.org/heimdal/>)

Detecting semantic data using multiple sensors in-the-wild

2017 - 2019

Spanish Ministry of Education and Competitiveness.

Research SPACES-UPM project (<http://www.geintra-uah.org/spaces/>)

Human behaviour supervision using multiple sensors

2014 - 2016

Spanish Ministry of Education and Competitiveness.

Work Experience

The Graffter (<http://www.thegraffter.com>)

Madrid, Spain

Facade building localisation for an augmented reality Android and iOS app

2013 - 2015

Research and develop on algorithms for localisation of buildings (with repetitive structures) on video streams. The application renders the live camera preview frame on the display to represent a superimposed image over the building. Demo: <https://www.youtube.com/watch?v=hIj3VY6du0k>.

CAB Magazine Online S.L

Madrid, Spain

OCR for Spanish ID documents on video

2012

The goal of the project was to read, in short video streams, the three OCR lines of the Spanish ID documents. OCR lines appears also on other countries passports (our software is valid for this other documents also with minimal customization). In this project we developed a full prototype using C++ and OpenCV on GNU/Linux. Unfortunately the company gave up on the project before the full validation of the prototype so we have the software and the project available to any interested company. Demo: <https://www.youtube.com/watch?v=3CaBmIKT06Y>.