Raúl Díaz García

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EDUCATION

University of California, Irvine

Ph.D., Computer Science, Sept 2011 - Oct 2016.

Thesis: Strong Geometric Context for Scene Understanding, Oct 2016.

Universitat Autònoma de Barcelona, Spain

 $M.S.,\ Computer\ Vision\ and\ Artificial\ Intelligence,\ Sept\ 2008\ -\ Sept\ 2009.$

B.S., Computer Science Engineering, Sept 2001 - June 2007.

Nottingham Trent University, UK

B.S.'s Final Year Project, Feb 2006 - Jun 2006.

EXPERIENCE

HP Inc, San Diego, CA

Since Oct 2016

Computer Vision and Machine Learning Research Engineer

- Development of computer vision tools for 3D scan metrics and quality assessment.
- Research of machine learning related new products.

CEPL, Barcelona, Spain

May 2010 - July 2011

Project analyst

- Supervised migration from Sony's logistic system to CEPL's.
- Maintained Sony's former legacy applications.

Sony Spain, Barcelona, Spain

Aug 2006 - April 2010

Chief Technology Architect

Lead the design of database schemes and supervised a team dedicated to implement software interfaces for Intranet development.

Business Consultant

• Evaluated the need for new business software tools across departments.

Software Engineer

• Designed the logistic division's new software layer on top of a host environment.

Isislan Servicios Informáticos, Sabadell, Spain Sept 2004 - Jan 2006 IT Engineer

• Network and Database administration of several customer companies.

TEACHING

Universitat Autònoma de Barcelona

Sept 2009 - July 2011

Teacher Assistant

- Introduction to Artificial Intelligence: lead discussion lectures on introductory concepts of AI like search, heuristics, and supervised/unsupervised learning.
- Artificial Vision: taught about initial aspects of vision such as acquisition, filtering, morphological transforms, description, segmentation, and clustering.
- Introduction to algorithms and programming: lead discussion lectures about basic data structures, algorithm concepts, and software life cycles (design, coding, test).
- Databases: taught discussion sessions on relational database architecture, entityrelationship models, design, and normalization.

REFEREED **CONFERENCE** AND

WORKSHOP

PUBLICATIONS

R. Díaz, A. Marathe. Soft Labels for Ordinal Regression. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR). Long Beach, California, June 2019.

- R. Díaz, C. Fowlkes. Cluster-wise Ratio Tests for Fast Camera Localization. In Workshop on Visual Odometry & Computer Vision Applications Based on Location Clues, IEEE Conference on Computer Vision and Pattern Recognition (CVPR). Honolulu, Hawaii, July 2017.
- R. Díaz, M. Lee, J. Schubert, C. Fowlkes. Lifting GIS Maps into Strong Geometric Context for Scene Understanding. In Proceedings of the IEEE Winter Conference on Applications of Computer Vision (WACV). Lake Placid, New York, 2016.
- R. Díaz*, S. Hallman*, C. Fowlkes. Detecting Dynamic Objects with Multi-View Background Subtraction. In Proceedings of the IEEE International Conference on Computer Vision (ICCV). Sydney, Australia, December 2013.
- R. Díaz*, S. Hallman*, C. Fowlkes. Multi-View Background Subtraction for Object Detection. In Scene Understanding Workshop, IEEE Conference on Computer Vision and Pattern Recognition (CVPR). Portland, Oregon, June 2013.

TECHNICAL SKILLS

Operating Systems: Windows, Linux

Languages: Python, C/C++, Matlab, Java

Machine Learning: Numpy, Scikit-learn, OpenCV, Tensorflow, Keras

Database: MySQL, PostgreSQL, Oracle Front-End: HTML, JSP, JavaScript

Familiar: OpenVMS, Pascal, Ruby, JSTL, Conan

Other: LATEX, Git, Subversion

LANGUAGE SKILLS

Spanish and **Catalan** as native speaker.

English:

- TOEFL, 2011.
 - Certificate in Advanced English (CAE), University of Cambridge, 2006.

AWARDS AND **GRANTS**

Balsells Fellowship, Sept 2011 - Aug 2013. Erasmus Fellowship, Feb 2006 - Jun 2006.

ADDITIONAL ACTIVITIES

Cooperated in the Catalan House of California, Sept 2011 - Aug 2013. http://www.casalcatalalosangeles.org/

Voluntary member of a presidential candidacy at Club Natació Sabadell, Spain, 2011. http://www.nataciosabadell.com/

Federated Futsal player, Spanish Futsal League:

- Futbol Sala Castellar, 2007 2011, team captain.
- Futbol Sala Bigues i Riells, 2006 2007, team captain.
- Club Natació Sabadell, 2001 2006.

Futsal coach:

• Ferran Casablancas High School, Sabadell, Spain, Sept 2002 - June 2007

^{*} equal contribution