

# Raúl Díaz García

LinkedIn : <https://www.linkedin.com/in/raul-diaz-garcia/>  
Homepage : <https://rauldiaz.github.io/>

diaz.raul@gmail.com  
rdiazgar@uci.edu

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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 software tools for 3D scan metrology and quality assessment.
- Research of novel computer vision and machine learning 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, entity-relationship 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.

\* equal contribution

**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:**  $\text{\LaTeX}$ , 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 Casablanas High School, Sabadell, Spain, Sept 2002 - June 2007