

# Javier Ribera

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<http://ribera.me>

## OBJECTIVE

To obtain a full-time computer vision/deep learning PhD-level position, starting August 2018.

## EDUCATION

**PhD Student, Electrical and Computer Engineering**  
Purdue University

Jan 2015 - Aug 2018  
West Lafayette, IN

**BS + MS, Telecommunications Engineering**  
Polytechnic University of Catalonia

Sep 2009 - Dec 2014  
Barcelona, Spain

## EXPERIENCE

**Research Assistant (Advisor: Prof. Edward Delp)**

Jan 2015 - Present  
West Lafayette, IN

Video and Image Processing (VIPER) Lab. Purdue University

Developed and used deep learning (CNNs, FCNs, GANs) and computer vision techniques for:

- Precision Agriculture. Count, locate and segment plants in aerial images taken from drones (ARPA-E project).
- Medical Imaging. Segment endocardium in echocardiograms and estimate heart ejection fraction.
- Visual Surveillance. Count people from videos. Improved accuracy by incorporating crowdsourcing.

**Research Intern**

May - Aug 2017  
San Jose, CA

Samsung Display America Lab

- Developed a new objective image fidelity metric that models the display and the Human Visual System.
- Goal: Evaluate visually lossless compression in Samsung displays.

**Web Development and System Administrator**

Jul - Dec 2013  
Barcelona, Spain

Telefónica (Talentum startups)

- Developed front-end and back-end of <http://mylittlebookbox.com> in a start-up (Boolino)

## PUBLICATIONS

1. "Counting Plants Using Deep Learning" – J. Ribera, Y. Chen, C. Boomsma, and E. J. Delp, *IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, November 2017, Montreal, Canada (to appear)
2. "Plant Leaf Segmentation For Estimating Phenotypic Traits" – Y. Chen, J. Ribera, C. Boomsma, and E. J. Delp, *IEEE International Conference on Image Processing*, September 2017, Beijing, China (to appear)
3. "Pill Recognition Using Minimal Labeled Data" – Y. Wang, J. Ribera, C. Liu, F. Zhu, and E. J. Delp, *IEEE International Conference on Multimedia Big Data*, April, 2017, Laguna Hills, CA. <https://doi.org/10.1109/BigMM.2017.61>
4. "Estimating Phenotypic Traits From UAV Based RGB Imagery" – J. Ribera, F. He, Y. Chen, A. F. Habib, and E. J. Delp, *ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, August 2016, San Francisco, CA
5. "Automatic and Manual Tattoo Localization" – J. Kim, H. Li, J. Yue, J. Ribera, L. Huffman, and E. J. Delp, *IEEE International Conference on Technologies for Homeland Security*, May 2016, Waltham, MA. <https://doi.org/10.1109/THS.2016.7568950>
6. "Characterizing The Uncertainty of Classification Methods and Its Impact on the Performance of Crowdsourcing" – J. Ribera, K. Tahboub, and E. J. Delp, *IS&T/SPIE Electronic Imaging*, February 2015, San Francisco, CA. <https://doi.org/10.1117/12.2085415>
7. "An Intelligent Crowdsourcing System for Forensic Analysis of Surveillance Video" – K. Tahboub, N. Gadgil, J. Ribera, B. Delgado, and E. J. Delp, *IS&T/SPIE Electronic Imaging*, February 2015, San Francisco, CA. <https://doi.org/10.1117/12.2077807>
8. "Automated Crowd Flow Estimation Enhanced by Crowdsourcing" – J. Ribera, K. Tahboub, and E. J. Delp, *IEEE National Aerospace & Electronics Conference* June 2014, Dayton, OH. <https://doi.org/10.1109/NAECON.2014.7045798>

## TECHNICAL SKILLS

<b>Programming</b>	Python, C, MATLAB, Java, HTML5, Javascript, PHP, Bash
<b>Libraries/Frameworks</b>	TensorFlow, PyTorch, Numpy, OpenCV, Django
<b>Languages</b>	Spanish (native), Catalan (native), French (intermediate)
<b>System Administration</b>	Linux

## VOLUNTEERING

- Job fair organizer at home university. Contacted companies and managed logistics and budget.
- LinuxUPC student society. Promoted and taught the use of open source software and culture through workshops.