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 — Jan 2015 - Aug 2018
Purdue University — *West Lafayette, IN*

BS + MS, Telecommunications Engineering — Sep 2009 - Dec 2014
Polytechnic University of Catalonia — *Barcelona, Spain*

EXPERIENCE

Research Assistant (Advisor**: Prof. Edward Delp)** — Jan 2015 - Present
Video and Image Processing (VIPER) Lab. Purdue University — *West Lafayette, IN*

Developed and used deep learning (CNNs, GCNs, 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
Samsung Display America Lab — *San Jose, CA*

- 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
Telefónica (Talentum startups) — *Barcelona, Spain*

- 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

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

VOLUNTEERING

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