

Xavier Puig

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Education

- **Massachusetts Institute of Technology** **Cambridge, MA**
PhD in Electrical Engineering and Computer Science 2018
Focus on Computer Vision and Machine Learning under the supervision of Prof. Antonio Torralba
- **Massachusetts Institute of Technology** **Cambridge, MA**
MSc in Electrical Engineering and Computer Science 2016–2018
Master Thesis: VirtualHome: Simulating Household Activities via Programs
GPA: 5.0/5.0
- **Universitat Politècnica de Catalunya** **Barcelona, Spain**
Double Degree in Telecommunications Engineering and Computer Science 2011–2016
Thesis: Frames in Places: Visual Common Sense Knowledge in Context
GPA Computer Science: 3.7/4.0, Rank 2/192
GPA Telecommunications Engineering: 3.6/4.0, Rank 2/66

Work Experience

- **Google** **Seattle, WA**
SWE PhD Intern June 2017–August 2017
Researched under the Mobile Vision team on adaptive computation neural networks for computer vision under the supervision of Li Zhang.
- **University of Toronto** **Toronto, Canada**
Research Assistant 2015–2016
Developed models for language and video alignment under the supervision of Prof. Sanja Fidler.
- **Massachusetts Institute of Technology** **Cambridge, MA**
Research Assistant 2015–2016
Built an image dataset and proposed models for situation recognition in images under the supervision of Prof. Antonio Torralba.
- **Synergic Partners** **Terrassa, Spain**
Data Science Intern 2015–2016
Developed models in R to predict flight purchase propensity.

Publications

- Xavier Puig, Kevin Ra, Marko Boben, Jiaman Li, Tingwu Wang, Sanja Fidler, and Antonio Torralba. Virtualhome: Simulating household activities via programs. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2018. **Selected as Oral**
- Bolei Zhou, Hang Zhao, Xavier Puig, Sanja Fidler, Adela Barriuso, and Antonio Torralba. Scene parsing through ade20k dataset. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 633–641, 2017
- Bolei Zhou, Hang Zhao, Xavier Puig, Sanja Fidler, Adela Barriuso, and Antonio Torralba. Semantic understanding of scenes through the ade20k dataset. *arXiv preprint arXiv:1608.05442*, 2016
- Hang Zhao, Xavier Puig, Bolei Zhou, Sanja Fidler, and Antonio Torralba. Open vocabulary scene parsing. In *2017 IEEE International Conference on Computer Vision (ICCV)*, pages 2021–2029. IEEE, 2017

Honors and Awards

- **La Caixa Fellow, 2016** **Barcelona, Spain**
○ *La Caixa Fellowship* *2016*
Selected for a fellowship offering full funding for two years of doctoral program.
- **CFIS fellowship** **Barcelona, Spain**
○ *Bachelor Thesis fellowship* *2015*
Selected for a fellowship partially funding one year stay for the bachelor thesis.
- **National Olympiad in Informatics** **Barcelona, Spain**
○ *Silver Medal* *2009–2011*
5th place in the Spanish National Olympiad in Informatics (2010, 2011) and 8th place in 2009.
- **Ibero-american Olympiad in Informatics** **Barcelona, Spain**
○ *Bronze Medal* *2009–2011*
Online Olympiad in Informatics involving Ibero-american countries.

Technical skills

- **Programming Languages and Frameworks:** Proficient in: Python, Tensorflow, PyTorch, C++, Matlab, Javascript. Experience in Theano, Caffe, HTML. Basic Knowledge in Prolog, Haskell.

Languages

- **Catalan:** Native Speaker
- **Spanish:** Native Speaker
- **English:** Proficient. 111 TOEFL iBT (2016) CAE-ESOL (2010).
- **French:** Advanced. DELF B2 (2011).

Other Activities

- **Reviewer:** Computer Vision and Pattern Recognition (CVPR) conference
- **MIT Vision Seminar:** Co-chair of the Computer Vision seminar at MIT

- **ILSVRC'16 MIT Scene Parsing Challenge:** Co-organizer of the scene parsing challenge at ILSVRC'16
- **Places Challenge 2017:** Co-organizer of the joint workshop for COCO and Places Challenges at ICCV'17. With instance parsing, semantic boundary detection and scene parsing tracks