

Olga Russakovsky

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Education

- **Ph.D. in computer science**, Stanford University, September 2015
Advisor: Prof. Fei-Fei Li
Thesis: Scaling Up Object Detection
- **M.S. in computer science, distinction in research**, Stanford University, June 2007
Advisor: Prof. Serafim Batzoglou
Thesis: Algorithms for Training Conditional Log-Linear Models
- **B.S. in mathematics with distinction**, Stanford University, April 2007

Awards

- **MIT Technology Review's 35 Innovators Under 35 award**, 2017
- **PAMI Everingham Prize**, 2016
Awarded for a series of datasets and challenges since 2010 that have had such impact on the computer vision field. ImageNet built on the Caltech101/256 datasets, increasing the number of images by orders of magnitude and enabling the development of new algorithms.
- **Outstanding Reviewer awards**, CVPR 2015 and CVPR 2016
- **Foreign Policy's 100 Leading Global Thinkers**, 2015
Awarded for founding and directing the Stanford AI Laboratory's outreach program
- **MIT EECS Rising Star award**, 2013
Awarded annually to "about 40 outstanding EECS graduate and postdoctoral women"
- **National Science Foundation Graduate research fellowship**, 2007-2010
- **Computing Research Association Undergraduate research award** finalist, 2007

Selected Media

- **Princeton Alumni Weekly**. *Making Smart Machines Fair*. June 6, 2018.
- **Education Week**. *AI4All Extends The Power of Artificial Intelligence to High School Girls*. March 1, 2018.
- **MIT Technology Review**. *The AI world will listen to these women in 2018*. January 9, 2018.
- **Wired**. *Meet the high schooler shaking up Artificial Intelligence*. October 26, 2017.
- **Australian Broadcasting Corporation**. *Science Friction extra: AI, eyes, girls and guys*. October 7, 2017.
- **Forbes**. *China's Rise In The Global AI Race Emerges As It Takes Over The Final ImageNet Competition*. July 31, 2017.

- **Quartz.** *The data that transformed AI research—and possibly the world.* July 26, 2017
- **Kathy Davis.** *Girl Power in the World of AI.* June 2, 2017.
- **EdTech.** *Stanford University’s Artificial Intelligence Summer Camp Expands the World of Computer Science.* Sept 2, 2016.
- **Invited opinion piece at MIT Technology Review.** *AI’s Research Rut.* Aug 23, 2016.
- **Motherboard.** *Can AI Help Gender Diversity Help AI?* April 19, 2016.
- **Foreign Policy.** *100 Leading Global Thinkers: For cracking the STEM ceiling.* Dec 1, 2015.
- **Wired.** *This Girls’ Summer Camp Could Help Change the World of AI.* Aug 31, 2015.
- **New Scientist.** *Computers are learning to see the world like we do.* Oct. 29, 2014.
- **MIT Technology Review.** *The Revolutionary Technique That Quietly Changed Machine Vision Forever.* Sept 9, 2014.
- **CBC Radio.** *Teaching computers to see.* Sept 5, 2014.
- **New York Times.** *Computer Eyesight Gets a Lot More Accuracy.* Aug 18, 2014.

Publications

Peer-reviewed journal articles

1. S. Yeung, O. Russakovsky, N. Jin, M. Andriluka, G. Mori and L. Fei-Fei. Every moment counts: dense detailed labeling of actions in complex videos. *International Journal of Computer Vision (IJCV)*, May, 2017.
2. A. Kovashka, O. Russakovsky, L. Fei-Fei and K. Grauman. Crowdsourcing in computer vision. *Foundation and Trends in Computer Graphics and Vision*, 10(3), 2016.
3. O. Russakovsky*, J. Deng*, H. Su, J. Krause, S. Satheesh, S. Ma, Z. Huang, A. Karpathy, A. Khosla, M. Bernstein, A. Berg and L. Fei-Fei. (* = equal contribution). ImageNet Large Scale Visual Recognition Challenge. *International Journal of Computer Vision (IJCV)*, 115(3), 2015.
Featured in **MIT Technology Review**.

Peer-reviewed conference articles

1. J. Wang, O. Russakovsky and D. Ramanan. The more you look, the more you see: towards general object understanding through recursive refinement. *Winter Conference on Applications in Computer Vision (WACV)*, 2018.
2. G. Sigurdsson, O. Russakovsky and A. Gupta. What Actions are Needed for Understanding Human Actions in Videos? *International Conference on Computer Vision (ICCV)*, 2017.
3. S. Ganju, O. Russakovsky and A. Gupta. What’s in a question: using visual questions as a form of supervision. *Computer Vision and Pattern Recognition (CVPR)*, 2017.
Spotlight presentation.
4. A. Dave, O. Russakovsky and D. Ramanan. Predictive-corrective networks for action detection. *Computer Vision and Pattern Recognition (CVPR)*, 2017.
5. S. Yeung, V. Ramanathan, O. Russakovsky, L. Shen, G. Mori and L. Fei-Fei. Learning to learn from noisy web videos. *Computer Vision and Pattern Recognition (CVPR)*, 2017.

6. G. Sigurdsson, O. Russakovsky, I. Laptev, A. Farhadi and A. Gupta. Much ado about time: exhaustive annotation of temporal data. *Conference on Human Computation and Crowdsourcing (HCOMP)*, 2016.
7. A. Bearman, O. Russakovsky, V. Ferrari and L. Fei-Fei. What's the point: semantic segmentation with point supervision. *European Conference on Computer Vision (ECCV)*, 2016.
8. S. Yeung, O. Russakovsky, G. Mori and L. Fei-Fei. End-to-end Learning of Action Detection from Frame Glimpses in Videos. *Computer Vision and Pattern Recognition (CVPR)*, 2016.
9. M. Vachovsky*, G. Wu*, S. Chaturapruek, O. Russakovsky, R. Sommer and L. Fei-Fei. (* = equal contribution). Towards More Gender Diversity in CS through an Artificial Intelligence Summer Program for High School Girls. *ACM Special Interest Group on Computer Science Education (SIGCSE)*, 2016.
10. O. Russakovsky, L.-J. Li and L. Fei-Fei. Best of both worlds: human-machine collaboration for object annotation. *Computer Vision and Pattern Recognition (CVPR)*, 2015.
11. D. Modolo, A. Vezhnevets, O. Russakovsky and V. Ferrari. Joint calibration of Ensemble of Exemplar SVMs. *Computer Vision and Pattern Recognition (CVPR)*, 2015.
12. J. Deng, O. Russakovsky, J. Krause, M. Bernstein, A. C. Berg and L. Fei-Fei. Scalable multi-label annotation. *ACM Conference on Human Factors in Computing Systems (CHI)*, 2014.
13. O. Russakovsky, J. Deng, Z. Huang, A. C. Berg and L. Fei-Fei. Detecting avocados to zucchinis: what have we done and where are we going? *International Conference on Computer Vision (ICCV)*, 2013.
14. O. Russakovsky, Y. Lin, K. Yu, L. Fei-Fei. Object-centric spatial pooling for image classification. *European Conference on Computer Vision (ECCV)*, 2012.
Best poster award at Google PhD summit 2013.
15. O. Russakovsky and L. Fei-Fei. Attribute learning in large-scale datasets. *Parts and Attributes Workshop of European Conference on Computer Vision (ECCVW)*, 2010.
16. E. Klingbeil, B. Carpenter, O. Russakovsky and A. Y. Ng. Autonomous operation of novel elevators for robot navigation. *International Conference on Robotics and Automation (ICRA)*, 2010.
17. O. Russakovsky and A. Y. Ng. A Steiner tree approach to efficient object detection. *Computer Vision and Pattern Recognition (CVPR)*, 2010
18. S. S. Gross, O. Russakovsky, C. B. Do and S. Batzoglou. Training Conditional Random Fields for maximum labelwise accuracy. *Advances in Neural Information Processing Systems (NIPS)*, 2007.

Patent

- O. Russakovsky, Y. Lin, K. Yu, F. Li. Object-centric spatial pooling for image classification. US 20130129199 A1.

Book chapter

- E. Davydov and O. Russakovsky. Introduction to Computer Science. *A Bioinformatics Guide for Molecular Biologists*. CSH Press, 2014.

Technical report

- S. Gould, O. Russakovsky, I. Goodfellow, P. Baumstarck, A. Y. Ng, D. Koller. The STAIR Vision Library. <http://ai.stanford.edu/~sgould/svl>, 2010.

Invited talks

- **CVPR workshop on Vision with Biased or Scarce Data.** *Fairness in computer vision.* June 22, 2018.
- **CVPR workshop on DeepVision.** *Fairness in computer vision.* June 18, 2018.
- **Keynote at O'Reilly AI conference.** *AI will change the world. Who will change AI?* May 2, 2018
- **O'Reilly AI conference.** *Five reasons why fairness is important and relevant in computer vision.* May 2, 2018.
- **Cornell Tech.** *The Human Side of Computer Vision.* Feb 23, 2018.
- **Applied ML days at EPFL.** *The Human Side of Computer Vision.* Jan 29, 2018.
- **Stanford University Math Camp.** *Towards Visual Artificial Intelligence.* July 31, 2017.
- **CVPR workshop on Visual Understanding by Learning from Web Data.** *Towards Web-scale Video Understanding.* July 26, 2017.
- **IBM Watson.** *The Human Side of Computer Vision.* Sep 6, 2016.
- **Stanford University Math Camp.** *A Quest for Visual Intelligence in Computers.* Aug 21, 2016.
- **University of Edinburgh.** *The Human Side of Computer Vision.* Aug 5, 2016.
- **University of Oxford.** *The Human Side of Computer Vision.* Aug 4, 2016.
- **Amazon Lab126.** *The Human Side of Computer Vision.* July 12, 2016.
- **Princeton University CS colloquium.** *The Human Side of Computer Vision.* April 14, 2016.
- **University of Michigan.** *The Human Side of Computer Vision.* April 4, 2016.
- **University of Southern California.** *The Human Side of Computer Vision.* March 23, 2016.
- **Facebook AI Research.** *The Human Side of Computer Vision.* March 18, 2016.
- **TTI Chicago.** *The Human Side of Computer Vision.* Feb 24, 2016.
- **University of Illinois Urbana-Champaign.** *The Human Side of Computer Vision.* Feb 22, 2016.
- **Michigan State University.** *Scaling Up Object Detection.* Jan 22, 2016.
- **Cornell University.** *Scaling Up Object Detection.* Dec 11, 2015.
- **NIPS workshop Women in Machine Learning.** *What's the point: semantic segmentation with point supervision.* Dec 7, 2015
- **University of Texas Austin.** *Scaling Up Object Detection.* Dec 4, 2015.
- **University of Pittsburgh.** *Scaling Up Object Detection.* Dec 2, 2015.
- **University of Washington.** *Scaling Up Object Detection.* Nov 23, 2015.
- **National Robotics Engineering Center.** *Scaling Up Object Detection.* Nov 20, 2015.
- **University of Southern California.** *Scaling Up Object Detection.* Nov 10, 2015.
- **Disney Research.** *Scaling Up Object Detection.* Oct 14, 2015.
- **UC San Diego.** *Scaling Up Object Detection.* Oct 2, 2015.
- **Caltech.** *Scaling Up Object Detection.* Oct 1, 2015.

- **GirlCode summer camp.** *A Quest for Visual Intelligence in Computers.* Aug 6, 2015.
- **Dropbox.** *Scaling Up Object Detection.* July 29, 2015.
- **Xerox PARC.** *Scaling Up Object Detection.* July 28, 2015.
- **Simon Fraser University.** *Scaling Up Object Detection.* July 24, 2015.
- **University of British Columbia.** *Scaling Up Object Detection.* July 23, 2015.
- **Stanford University Math Camp.** *ImageNet Large Scale Visual Recognition Challenge.* July 21, 2015.
- **NVIDIA.** *Scaling Up Object Detection.* July 21, 2015.
- **Google.** *Scaling Up Object Detection.* June 24, 2015.
- **CVPR workshop ChaLearn Looking at People.** *Best of Both Worlds: Human-Machine Collaboration for Object Annotation.* June 12, 2015.
- **Carnegie Mellon University VASC seminar.** *Designing and Overcoming Challenges in Large-Scale Object Detection.* Mar 20, 2015.
- **NVIDIA GPU Technology Conference.** *ImageNet Large Scale Visual Recognition Challenge.* (with Alexander Berg). Mar 19, 2015.
- **UC Irvine.** *Designing and Overcoming Challenges in Large-Scale Object Detection.* Jan 15, 2015.
- **Baidu.** *ImageNet Large Scale Visual Recognition Challenge.* Jan 7, 2015.
- **NIPS workshop on Challenges in Machine Learning.** *ImageNet Large Scale Visual Recognition Challenge.* Dec 12, 2014.
- **Yahoo! Research Labs.** *ImageNet Large Scale Visual Recognition Challenge.* Dec 8, 2014.
- **UC Berkeley.** *ImageNet Large Scale Visual Recognition Challenge.* Nov 18, 2014.
- **Photo App Meetup.** *ImageNet Large Scale Visual Recognition Challenge.* Sep 25, 2014.
- **Apple.** *ImageNet Large Scale Visual Recognition Challenge.* Sep 18, 2014.
- **Australian National University.** *Analysis of Large Scale Visual Recognition.* Nov 29, 2013.
- **Bay Area Vision Meeting.** *Analysis of Large Scale Visual Recognition.* (with Fei-Fei Li). Oct 4, 2013.
- **UC Berkeley.** *Analysis of Large Scale Visual Recognition.* June 5, 2013.
- **AAAI Symposium on Weakly Supervised Learning from Multimedia.** *Object-Centric Spatial Pooling for Image Classification.* Mar 25, 2013.
- **ECCV workshop on Parts and Attributes.** *Attribute Learning in Large-Scale Datasets.* Sep 10, 2010.

Employment

- Assistant professor, Computer Science Department, Princeton University 2017 - now
- Postdoctoral research fellow, Robotics Institute, Carnegie Mellon University 2015 - 2017
Advisors: Prof. Deva Ramanan and Abhinav Gupta
- Research assistant with Prof. Fei-Fei Li, Stanford Vision lab 2010 - 2015
- Research intern in the Media Analytics team, NEC Labs America, Summers 2011 - 2013
- Research assistant with Prof. Andrew Ng, Stanford University 2007 - 2010
- Undergraduate research assistant with Prof. Serafim Batzoglou, Stanford Univ. 2005 - 2007

Professional activities

Computer vision community

- **Workshop Chair**, IEEE/CVF International Conference on Computer Vision (ICCV) 2021
- **Doctoral Consortium Chair**, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019
- **Board member**, Common Visual Data Foundation (CVDF) 2016-now
- **Organizer, ImageNet Large Scale Visual Recognition Challenge**, 2013-2017
- **Organizer**, ImageNet Large Scale Visual Recognition Challenge workshops at ICCV 2013, ECCV 2014, ICCV 2015, ECCV 2016, CVPR 2017
- **Publicity and Press Chair**, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2016
- **Organizer**, BigVision: International Workshop on Large Scale Visual Recognition and Retrieval; at CVPR 2015, CVPR 2016.
- **Organizer**, ImageNet Large Scale Visual Recognition Challenge tutorial at CVPR 2015
- **Organizer and co-founder**, WiCV: Women in Computer Vision workshop; at CVPR 2015.

Program committees

- **Area Chair**, IEEE Computer Vision and Pattern Recognition (CVPR) 2019
- **Area Chair**, IEEE Computer Vision and Pattern Recognition (CVPR) 2018
- **Area Chair**, IEEE Winter Conference on Applications of Computer Vision (WACV) 2016
- **Panelist**, National Science Foundation (NSF) 2017
- **Reviewer** for journals: IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Computer Vision and Image Understanding (CVIU), Pattern Recognition (PR)
- **Reviewer** for conferences: Computer Vision and Pattern Recognition (CVPR), European Conference on Computer Vision (ECCV), International Conference on Computer Vision (ICCV), Neural Information Processing Systems (NIPS), International Conference on Machine Learning (ICML), International Conference on Learning Representations (ICLR), Conference on Human Computation and Crowdsourcing (HCOMP), Conference on Computer Graphics and Interactive Techniques (SIGGRAPH). **Outstanding reviewer awards at CVPR 2015 and CVPR 2016**

University service (except outreach)

- **Co-founder** of the monthly Research Inclusion Social Event, Princeton, 2017-now
- **Student member** of the Stanford Computer Science Department Faculty Search committee, 2015
- **Co-founder** of the Stanford Women in AI group with quarterly events, 2014-2015
- **Founder** of the weekly Stanford Computer Vision reading group, 2008-2014

Outreach K-12

- **Co-founder and Board Member, AI4ALL foundation**, 2016-now.
 - AI4ALL is a nonprofit working to increase diversity and inclusion in Artificial Intelligence. We create pipelines for underrepresented talent through education and

mentorship programs around the U.S. and Canada that give high school students early exposure to AI for social good. Our vision is for AI to be developed by a broad group of thinkers and doers advancing AI for humanity's benefit. More details at <http://ai-4-all.org>.

- **Co-founder and co-director, Princeton AI4ALL outreach summer camp, 2018-now**
 - We are bringing together the Princeton Computer Science Department, the Princeton Center for Information Technology Policy, and the AI4ALL foundation to create a summer camp teaching AI to high school students. The camp will run for 3 weeks, and will target rising 11th graders from racial/ethnic groups dramatically underrepresented in AI: Black/African American, Hispanic/Latino/Latina, and Native American. More details at <http://ai4all.princeton.edu>.
- **Co-founder and co-director, Stanford AI4ALL outreach summer camp, 2015-2017**
 - The camp, formerly known as “SAILORS,” is teaching AI to high school girls in a three-week technically rigorous curriculum. The ultimate goal is to increase diversity in STEM. The camp was featured in Wired, a research study on its impact was published in SIGCSE 2016, and its success inspired the creation of the national AI4ALL foundation. More details at <http://ai4all.stanford.edu>.

Teaching

- COS 429: Computer Vision Fall 2018
- COS 598B: Advanced Topics in Computer Science: Visual Recognition Spring 2018
- COS 429: Computer Vision Fall 2017
- Head teaching assistant; CS228: Probabilistic graphical models; Stanford U Winter 2010
- Head teaching assistant; CS221: Artificial Intelligence; Stanford U Fall 2009
- Instructor; Educational Program for Gifted Youth middle school math course Summer 2007

Mentoring

Princeton University (as an Assistant Professor)

- Kenji Hata, PhD student 2017-now
- Berthy Feng, Undergraduate senior thesis 2018-now
- Ryan McCaffrey, Undergraduate senior thesis 2018-now
- Ioannis Karakozis, Undergraduate senior thesis 2018-now
- Rohan Doshi, Undergraduate senior thesis 2017-2018
 - Title: Zero-Shot Semantic Segmentation
 - Awards: CRA Undergraduate Research Award honorable mention
- William Hinthorn, Undergraduate senior thesis 2017-2018
 - Title: Inferring Intent from Pointing with Computer Vision
 - Awards: Outstanding Computer Science Senior Thesis Prize
- Prem Nair, Undergraduate senior thesis 2017-2018
 - Title: An Exploration of Multi-class Multi-domain Image Classification

Awards: Accenture Prize, Phillip Goldman'86 Senior Prize in Computer Science

Carnegie Mellon University (as a postdoc)

- Achal Dave, PhD student advised by Deva Ramanan 2015-2017
He is the lead author on a CVPR 2017 paper.
- Gunnar Sigurdsson, PhD student advised by Abhinav Gupta 2016-2017
He is the lead author on HCOMP 2016 and ICCV 2017 papers
- Jingyan Wang, PhD student advised by Deva Ramanan 2015-2017
She is the lead author on a WACV 2018 paper
- Siddha Ganju, Master's student 2016-2017
She is the lead author on a CVPR 2017 paper

Stanford University (as a PhD student)

- Serena Yeung, PhD student advised by Fei-Fei Li 2015-2017
She is the lead author on CVPR 2016, CVPR 2017 and IJCV 2017 papers
- Sean Ma, Master's student 2013-2014
He was a co-organizer of the ImageNet Challenge 2014
- Amy Bearman, Undergraduate student 2015-2016
She is the lead author on an ECCV 2016 paper
- Carl Case, Undergraduate student 2009-2010
He is now at Baidu research.