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JIA DENG

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Education

- Ph.D. in Computer Science, **Princeton University**. 2012
  Advisor: Fei-Fei Li and Kai Li
- M.A. in Computer Science, **Princeton University**. 2008
- B.Eng. in Computer Science, **Tsinghua University**, 2006
  Ranked 1st out of 174 in the Class of 2006

Awards and Honors

- **Google Faculty Research Award**, 2015
- **Yahoo ACE (Academic Career Enhancement) Award,** 2014
- **Best Paper Award**, ECCV 2014.
- **Marr Prize (Best Paper Award)**, ICCV 2013.
- **Doctoral Consortium Travel Grant**, CVPR 2012.
- **Outstanding Graduate**, Tsinghua University, 2006
- **IBM Scholarship for Outstanding Students in China**, 2005
- **OOCL Scholarship**, Tsinghua University, 2004
- **Lenovo Scholarship**, Tsinghua University, 2003

Professional Experience

- Assistant Professor, Computer Science and Engineering, **University of Michigan**, Ann Arbor, MI. 2014/9-present.
- Postdoc (consulting), **Google**, Mountain View, CA. 2013/10-2014/8.
- Visiting Assistant Professor, Computer Science and Engineering, **University of Michigan**, Ann Arbor, MI. 2013/9-2014/8.
- Visiting Scholar, **Stanford University**, CA. 2013/10-2014/8.
- Postdoctoral Scholar, **Stanford University**, Stanford, CA. 2012/7-2013/10.
- Visiting Student, **Stanford University**, Stanford, CA. 2009/9-2012/6.
- Research Intern, **Microsoft Research Silicon Valley**. Mountain View, CA, 2010/6-2010/9
- Software Engineering Intern, **Google**, Mountain View, CA. 2007/6-2007/9

Publications

http://scholar.google.com/citations?user=U3Eub-EAAAAJ&hl=en&oi=ao

- Weifeng Chen, Zhao Fu, Dawei Yang, **Jia Deng**. Single-Image Depth Perception in the Wild. *Neural Information Processing Systems (NIPS), 2016.*

- Mingzhe Wang, Mahmoud Azab, Noriyuki Kojima, Rada Mihalcea, **Jia Deng.** Structured Matching for Phrase Localization. *European Conference on Computer Vision (ECCV), 2016*
- Alejandro Newell, Kaiyu Yang, **Jia Deng**. Stacked Hourglass Networks for Human Pose Estimation**.** *European Conference on Computer Vision (ECCV), 2016.*
- Vicente Ordonez, Wei Liu, **Jia Deng**, Yejin Choi, Alexander C. Berg, Tamara L. Berg. Learning to Name Objects. *Communications of the ACM. March 2016 (Vol. 59, No. 3).*
- Yu-Wei Chao, Zhan Wang, Yugeng He, Jiaxuan Wang, **Jia Deng**. HICO: A Benchmark for Recognizing Human-Object Interactions in Images. *International Conference on Computer Vision (ICCV) 2015.*
- Nan Ding, **Jia Deng**, Kevin Murphy, Hartmut Neven. Probabilistic Label Relation Graphs with Ising Models. *International Conference on Computer Vision (ICCV) 2015.*
- Vignesh Ramanathan, Congcong Li, **Jia Deng**, Wei Han, Zhen Li, Kunlong Gu, Yang Song, Samy Bengio, Charles Rosenberg, Fei-Fei Li. Learning semantic relationships for better action retrieval in images. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR*) *2015.*
- Yu-Wei Chao, Zhan Wang, Rada Mihalcea**, Jia Deng**. Mining Semantic Affordances of Visual Object Categories. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2015.*
- Vicente Ordonez, Wei Liu, **Jia Deng**, Yejin Choi, Alexander C. Berg, Tamara L. Berg. Predicting Entry-Level Categories. *International Journal of Computer Vision (IJCV), 2015.*
- Olga Russakovsky*, **Jia Deng***, Hao Su, Jonathan Krause, Sanjeev Satheesh, Sean Ma, Zhiheng Huang, Andrej Karpathy, Aditya Khosla, Michael Bernstein, Alexander C. Berg and Li Fei-Fei. ImageNet Large Scale Visual Recognition Challenge. *International Journal of Computer Vision (IJCV), 2015.* (*equal contribution).
- **Jia Deng**, Jonathan Krause, Michael Stark, Li Fei-Fei. Leveraging the Wisdom of the Crowd for Fine-Grained Recognition. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI). 2015.*
- **Jia Deng**, Nan Ding, Yangqing Jia, Andrea Frome, Kevin Murphy, Samy Bengio, Yuan Li, Hartmut Neven, Hartwig Adam. Large-Scale Object Classification Using Label Relation Graphs. *European Conference on Computer Vision (ECCV), 2014.* **Best Paper Award**.
- Jonathan Krause, Timit Gebru, **Jia Deng**, Jia Li, Li Fei-Fei. Learning Features and Parts for Fine-Grained Recognition. *International Conference on Pattern Recognition (ICPR), 2014.*
- **Jia Deng**, Olga Russakovsky, Jonathan Krause, Michael Bernstein, Alexander C. Berg and Li Fei-Fei. Scalable Multi-Label Annotation. *ACM Conference on Human Factors in Computing Systems (CHI), 2014.*
- Jonathan Krause, Michael Stark, **Jia Deng**, Li Fei-Fei. 3D Object Representations for Fine-Grained Categorization. *ICCV '13 Workshop on 3D Representation and Recognition (3dRR-13), 2013.*
- Olga Russakovsky, **Jia Deng**, Zhiheng Huang, Alex Berg, Li Fei-Fei. Detecting avocados to zucchinis: what have we done, and where are we going? *In International Conference on Computer Vision (ICCV), 2013.*
- Vicente Ordonez, **Jia Deng**, Yejin Choi, Alex Berg, Tamara Berg. From Large Scale Image Categorization to Entry-Level Categories. *In International Conference on Computer Vision (ICCV), 2013.* **Marr Prize (Best Paper Award).**

- **Jia Deng**, Jonathan Krause, and Li Fei-Fei. Fine-Grained Crowdsourcing for Fine-Grained Recognition. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013.*
- Hao Su, **Jia Deng**, and Li Fei-Fei. Crowdsourcing Annotations for Visual Object Detection. *In AAAI Human Computation Workshop, 2012.*
- **Jia Deng**, Large Scale Visual Recognition. *Ph.D. Thesis, Princeton University. 2012.*
- **Jia Deng**, Jonathan Krause, Alex Berg, and Li Fei-Fei. Hedging Your Bets: Optimizing Accuracy-Specificity Trade-offs in Large-Scale Visual Recognition. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2012.*
- **Jia Deng**, Sanjeev Satheesh, Alex Berg, and Li Fei-Fei. Fast and Balanced: Efficient Label Tree Learning for Large Scale Object Recognition. *In Advances in Neural Information Processing Systems (NIPS), 2011.*
- **Jia Deng**, Alex Berg, and Li Fei-Fei. Hierarchical Semantic Indexing for Large Scale Image Retrieval. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2011.*
- **Jia Deng**, Alex Berg, Kai Li, and Li Fei-Fei. What does classifying more than 10,000 image categories tell us? *In European Conference on Computer Vision (ECCV), 2010.*
- **Jia Deng**, Wei Dong, Richard Socher, Li-Jia Li, Kai Li and Li Fei-Fei. ImageNet: A Large-Scale Hierarchical Image Database. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009*. **Featured in the New York Times.**
- Brandon Collins, **Jia Deng**, Kai Li, and Li Fei-Fei. Towards scalable dataset construction: An active learning approach. *In European Conference on Computer Vision (ECCV), 2008.*
- Tim Weyrich, **Jia Deng**, Connelly Barnes, Szymon Rusinkiewicz, and Adam Finkelstein. Digital Bas-Relief From 3D Scenes. *ACM Transactions on Graphics (Proc. SIGGRAPH), 26(3), 2007.*

Press Coverage

- *Seeking a Better Way to Find Web Images.* **The New York Times**, 11/19/2012. Featuring my PhD work (the ImageNet project).
- *Sorting through photos*. **Communication of ACM.** Vol. 54, May 2011. Covers my PhD work (ImageNet and the ImageNet challenges).

Professional Activities

- Area Chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2016
- Reviewer, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2012, 2013, 2014, 2015, 2017
- Program Committee, Second Workshop on Fine-Grained Visual Categorization, 2013
- Reviewer, *Advances in Neural Information Processing Systems (NIPS),* 2012, 2013, 2014, 2015, 2016
- Reviewer, *European Conference on Computer Vision (ECCV),* 2012, 2014, 2016
- Reviewer, *International Conference on Computer Vision (ICCV),* 2013, 2015
- Reviewer, The 40th International Conference and Exhibition on Computer Graphics and Interactive Techniques (SIGGRAPH) 2013.
- Reviewer, *International Journal of Computer Vision (IJCV).*

- Reviewer, *Transactions on Pattern Recognition and Machine Intelligence (TPAMI)*
- Reviewer, *Journal of Machine Learning Research (JMLR)*
- Reviewer, *Transactions on Image Processing (TIP)*
- Reviewer, *Transactions on Multimedia (TMM)*
- Reviewer, *Computer Aided Design (CAD)*
- Reviewer, *AAAI Conference on Artificial Intelligence (AAAI) 2014*
- Reviewer, *ACM Symposium on User Interface Software and Technology (UIST) 2014*
- Reviewer, *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp) 2014*
- Program Co-chair. *Big Data Meets Computer Vision: International Workshop on Large Scale Visual Recognition and Retrieval (BigVision 2012, 2014, 2015, 2016)*
- Program Co-chair. *CVPR workshop on Computer Vision and Human Computation, 2014*
- Program Committee. *Scene Understanding Workshop (SUNw), CVPR 2014.*
- Organizer. *Bay Area Vision Meeting* 2012.
- Organizer. *ImageNet Large Scale Visual Recognition Challenge 2010 – 2016*

Conference Abstracts, Demos, and Exhibitions

- **Jia Deng**, Jonathan Krause, Zhiheng Huang, Alex Berg, Li Fei-Fei. EVA: Engine for Visual Annotation. *In Advances in Neural Information Processing Systems (NIPS), 2012. (live demo)*
- **Jia Deng**, Jonathan Krause, Zhiheng Huang, Alex Berg, Li Fei-Fei. EVA: Engine for Visual Annotation. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2012. (live demo)*
- **Jia Deng**, Jonathan Krause, Zhiheng Huang, Alex Berg, Li Fei-Fei. EVA: Engine for Visual Annotation. *In Bay Area Vision Meeting (2012). (live demo)*
- Li Fei-Fei, **Jia Deng**, Kai Li. *In Vision Science Society (VSS), 2009. (abstract)*

Teaching Experience

- Instructor, EECS 445 Introduction to Machine Learning, University of Michigan, Fall 2016.
- Instructor, ECCS 442 Computer Vision, University of Michigan, Winter 2016.
- Instructor, ECCS 542 Advanced Topics in Computer Vision, University of Michigan, Fall 2015.
- Instructor, ECCS 442 Computer Vision, University of Michigan, Winter 2015.
- Instructor. EECS 542 Advanced Topics in Computer Vision, University of Michigan, Fall 2014.
- Teaching Assistant. COS333 Advanced Programming Techniques, Princeton University. 2008-2009 Spring
- Teaching Assistant. COS429 Computer Vision. Princeton University. 2008-2009 Fall
- Teaching Assistant. Computer Organization. Tsinghua University. 2005-2006 Fall

Seminars and Invited Talks

- *Going Deeper in Semantics and Mid-level Vision*
    - Stanford University, April 2016.
    - Google, Mountain View, CA, April 2016.

  - University of California, Berkeley, April 2016.
- *Knowledge Driven Recognition of Objects and Actions*
  - Wayne State University, February 2016.
  - Chinese Academy of Sciences, Beijing, China, August 2015.
  - ICML 2015 Extreme Classification Workshop, Lille, France, July 2015.
  - Amazon, Seattle, WA, May 2015.
  - DVMM Lab, Columbia University, March 2015.
  - Department of Statistics Seminar, University of Michigan, March 2015.
- *Learning Visual Models with a Knowledge Graph*
  - NIPS 2014 workshop: Representation and Learning Methods for Complex Outputs, December 2014.
- *Large-Scale Image Understanding Powered by Data, Crowd, and Knowledge*
  - General Motors R&D, Warren, MI, May 2015.
  - Tsinghua University, Beijing, China, November 2014.
- *Large-Scale Object Recognition Using a Knowledge Graph*
  - NEC Labs America, Cupertino, CA, October 2014.
- *Advancing Visual Recognition with Big Data*
  - CMU VASU Seminar, February 2014.
- *Large-Scale Visual Recognition Powered by Big Data.*
  - Microsoft Research Redmond, May 2013.
  - Adobe Research, San Jose, California, March 2013.
  - Visual Computing Lunch, UC Berkeley, March 2013.
  - NEC Labs America, Cupertino, CA, March 2013.
  - Computer Vision Laboratory, University Southern California, March 2013.
  - Center for Vision, Cognition, Learning, and Art, University of California Los Angeles, March 2013.
- *Building the Forest to See Trees: Toward Large Scale Visual Recognition.*
  - GE Research, San Ramon, California, November 2012.
  - Google Research, Mountain View, California, March 2012.
  - SRI International Sarnoff, Princeton, New Jersey, January 2012.
  - GRASP Laboratory, University of Pennsylvania. January 2012.
  - Computational Vision Group, California Institute of Technology, January 2012.
  - Institute for Pure & Applied Mathematics, University of California Los Angeles, January 2012.

Funding

- National Science Foundation. *BIGDATA: F: Collaborative Research: From Visual Data to Visual Understanding*. 2016-2020. PI.
- National Science Foundation. *RI: Small: Inverse Rendering by Co-Evolutionary Learning*. 2016-2019. PI.
- Procter & Gamble. *Automated Video-Based Human Pose Estimation and Activity Recognition for Understanding Consumer Habits*. 2016-2018. PI.

- King Abdullah University of Science and Technology. *Extreme Classification of Complex Data*. 2016-2019. PI (Subaward).
- Intuitive Surgical. *Using computer vision to analyze the technical skill of surgeons performing robotic prostatectomy*. 2016. Co-PI.
- National Science Foundation. *VEC: Medium: Large-Scale Visual Recognition: From Cloud Data Centers to Wearable Devices.* #1539011. 2015-2018. PI.
- Intel. *VEC: Medium: Large-Scale Visual Recognition: From Cloud Data Centers to Wearable Devices*. 2015-2018. PI.
- General Motors. *Camera-Based Object Recognition for Autonomous Driving*. 2015-2017. PI.
- Google. *Beyond Entities: Understanding Relations in Images*. 2015-2016. PI.