Omid Poursaeed

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Education

2015–Present **Ph.D.** Electrical and Computer Engineering, Cornell University & Cornell Tech, **GPA: 4.18/4.3**
Advisor: Professor **Serge Belongie**
Courses: Advanced Topics in Machine Learning, Computer Vision, Machine Learning for Data Science, Statistical Inference and Decision, Natural Language Processing, Linear Programming, Real Analysis

2010–2015 **B.Sc.** Sharif University of Technology, Tehran, Iran (Graduated with honors)
Major: Electrical Engineering, Minor: Mathematics

2006–2010 Allameh Helli High School, Affiliated with the *National Organization for Development of Exceptional Talents (NODET)*

Research Interests

- Computer Vision
- Adversarial Learning
- Generative Models
- 3D Deep Learning

Experience

Summer 2019 Research Intern at **Adobe Research**
– Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Matthew Fisher*
– Worked on Hybrid Surface Representations for Generative 3D Modeling (ECCV 2020)

Fall & Winter 2019 Research Intern at **Facebook AI**
– Research Intern in the Computer Vision team with *Ser-Nam Lim*
– Worked on Fine-grained Generation of Unrestricted Adversarial Examples (under review)

Summer 2018 Research Intern at **Adobe Research**
– Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Eli Shechtman*
– Worked on Generative Modeling of 2.5D Animation (WACV 2020)

Summer 2017 Research Intern at **eBay Research**
– Research Intern with *Shuai Zheng*, *Hadi Kiapour* and *Robinson Piramuthu*
– Worked on Generative Modeling of Street-fashion Imagery with Stacked Generative Adversarial Networks (published patent)

2016 – 2020 Research Assistant at *SE(3) Computer Vision Group at Cornell Tech* with Professor **Serge Belongie**

2013 – 2014 Research Assistant at *Optical Networks Research Lab* with Professor Jawad Salehi (IEEE Fellow)

Publications

[1] Coupling Explicit & Implicit Surface Representations for Generative 3D Modeling; ECCV 2020
Omid Poursaeed, Vladimir Kim, Matthew Fisher, Noam Aigerman

[2] Fine-grained Synthesis of Unrestricted Adversarial Examples; Under Review
Omid Poursaeed, Tianxing Jiang, Harry Yang, Serge Belongie, Ser-Nam Lim

[3] Interpolative AutoEncoders for Unsupervised Few-Shot Image Generation; Under Review
Davis Wertheimer, Omid Poursaeed, Yordanos Goshu, Bharath Hariharan

[4]   Neural Puppet: Generative Layered Cartoon Characters; WACV 2020
      Omid Poursaeed, Vladimir Kim, Eli Shechtman, Jun Saito and Serge Belongie

[5]   Differential Privacy has Disparate Impact on Model Accuracy; NeurIPS 2019
      Eugene Bagdasaryan, Omid Poursaeed, Vitaly Shmatikov

[6]   Generative Adversarial Perturbations; CVPR 2018
      Omid Poursaeed, Isay Katsman, Bicheng Gao and Serge Belongie

[7]   Deep Fundamental Matrix Estimation without Correspondences; ECCV 2018
      Omid Poursaeed*, Guandao Yang*, Aditya Prakash*, Hanqing Jiang, Qiuren Fang, Bharath Hariharan,
      Serge Belongie (*equal contribution)

[8]   Stacked Generative Adversarial Networks; CVPR 2017
      Xun Huang, Yixuan Li, Omid Poursaeed, John Hopcroft and Serge Belongie

[9]   Vision-based Real Estate Price Estimation: Machine Vision and Applications 2017
      Omid Poursaeed, Tomas Matera and Serge Belongie

[10] Analytical studies of fragmented-spectrum multi-level OFDM-CDMA technique in cognitive radio
      networks: IEEE UEMCON 2016
      Farhad Akhoundi, Saeed Sharifi-Malvajerdi, Omid Poursaeed and Jawad A. Salehi

[11] Cognitive-engined spectrum-fragmented synchronous MC-CDMA based on generalized hadamard
      codes; IEEE WCNC 2015
      M.H. Shoreh, M.J. Khojasteh, Omid Poursaeed and Jawad A. Salehi

[12] Resource allocation using fragmented-spectrum synchronous OFDM-CDMA in cognitive radio net-
      works; IWCIT 2014
      Farhad Akhoondi, Omid Poursaeed and Jawad A. Salehi

Honors and Awards

2019   Awarded **DLI Doctoral Fellowship** from Cornell Tech

2015   Awarded **Jacobs Fellowship** from Cornell University

2010   Ranked **12**[th] among more than 277,000 participants in the Nationwide Entrance Exam of Universities

2010   Ranked **9**[th] among more than 300,000 participants in the Azad University's Entrance Exam

2010-2014   Awarded Fellowship of the *National Foundation of Elites*

2003-2010   Member of the National Organization for Development of Exceptional Talents (NODET)

Professional Service

Reviewer for CVPR, NeurIPS, ICCV, ECCV, AAAI, IEEE TPAMI, IEEE Transactions on Multimedia, ACM Transactions on Privacy & Security, IEEE Transactions on Industrial Electronics

Program Committee member for AAAI and CVPR Workshop on Adversarial Machine Learning

Patents

[1]   Generating a digital image using a generative adversarial network,
      with Shuai Zheng, Hadi Kiapour and Robinson Piramuthu

[2]   Object animation using Generative Neural Networks (pending),
      with Vladimir Kim, Jun Saito and Eli Shechtman

[3]   Learning Hybrid Shape Representations (pending),
      with Vladimir Kim, Matthew Fisher and Noam Aigerman

Technical Skills

Programming   Python, Pytorch, TensorFlow, Torch7, Chainer, BVLC Caffe, Theano (Lasagne, Keras), The scientific Python stack (numpy/scipy, scikit-learn, etc), MATLAB, C/C++, HTML

Platforms   Linux/UNIX, Amazon Web Services (AWS), Google Cloud Platform, Amazon Mechanical Turk