Omid Poursaeed

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Education

2015–2020 **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 (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
- Generative Models
- Adversarial Learning
- 3D Deep Learning

Publications

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

[2] Self-supervised Learning of Point Clouds via Orientation Estimation; 3DV 2020
Omid Poursaeed, Tianxing Jiang, Han Qiao, Nayun Xu, Vladimir Kim

[3] Fine-grained Generation of Unrestricted Adversarial Examples; Under Review (ICLR 2021)
Omid Poursaeed, Tianxing Jiang, Harry Yang, Serge Belongie, Ser-Nam Lim

[4] Interpolative Autoencoders for Unsupervised Few-shot Image Generation; Under Review (ICLR 2021)
Davis Wertheimer, Omid Poursaeed, Bharath Hariharan

[5] Neural Puppet: Generative Layered Cartoon Characters; WACV 2019
Omid Poursaeed, Vladimir Kim, Eli Shechtman, Jun Saito, Serge Belongie

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

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

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

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

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

[11] Analytical studies of fragmented-spectrum multi-level OFDM-CDMA technique in cognitive radio networks; IEEE UEMCON 2016; Farhad Akhoundi, Saeed Sharifi, Omid Poursaeed, Jawad Salehi

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

[13] Resource allocation using fragmented-spectrum synchronous OFDM-CDMA in cognitive radio networks; IWCIT 2014; Farhad Akhoundi, Omid Poursaeed, Jawad Salehi

Experience

Summer 2019	Research Intern at **Adobe Research**
	– Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Matthew Fisher*
	– 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*
	– Fine-grained Generation of Unrestricted Adversarial Examples (under review at ICLR 2021)
Summer 2018	Research Intern at **Adobe Research**
	– Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Eli Shechtman*
	– Generative Modeling of 2.5D Animation via Template Mesh Deformation (WACV 2019)
Summer 2017	Research Intern at **eBay Research**
	– Research Intern with *Shuai Zheng*, *Hadi Kiapour* and *Robinson Piramuthu*
	– 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

Honors and Awards

2019	Awarded **DLI Doctoral Fellowship** from Cornell Tech
2015	Awarded **Jacobs Fellowship** from Cornell University
2010	Ranked 12th among more than 277,000 participants in the Nationwide Entrance Exam of Universities
2010	Ranked 9th 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)

Presentations

[1] Learning to Generate and Animate for Augmented Reality: Invited talk at Facebook Reality Labs

[2] Hybrid Generative Models for 2D and 3D Computer Vision: Invited talk at Apple & Snapchat

[3] DeepFakes and Adversarial Examples: Fooling Humans and Machines: Digital Life Seminar Series

Professional Service

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

Program Committee member for CVPR Workshop on Adversarial Machine Learning

Patents

[1] Generating a Digital Image using a Generative Adversarial Network, with S. Zheng, H. Kiapour and R. Piramuthu

[2] Object Animation using Generative Neural Networks, with V. Kim, J. Saito and E. Shechtman

[3] Learning Hybrid Shape Representations (pending), with V. Kim, M. Fisher and N. Aigerman

Technical Skills

Programming	Python, C/C++, Pytorch, TensorFlow, Torch7, Chainer, BVLC Caffe, Theano (Lasagne, Keras), The scientific Python stack (numpy/scipy, scikit-learn, etc), MATLAB, HTML
Platforms	Linux/UNIX, Amazon Web Services (AWS), Google Cloud Platform, Amazon Mechanical Turk