Amir Arsalan Soltani

(US Permanent Resident)
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SKILLS

AI and ML: Neural Networks, Graphical Models, Bayesian Optimization, Reinforcement Learning*
Technical: PyTorch, Blender, NVIDIA FleX, C++ *some exposure

EDUCATION

Brown University, *Providence, RI* **September 2020 - Present**
Doctor of Philosophy, Computer Science

State University of New York at Buffalo, *Buffalo, NY* **December 2015**
Master of Science, Computer Science | *Concentration: Machine Learning*

Islamic Azad University, *Najafabab, Iran* **May 2012**
Bachelor of Science, Computer Science
Awards: Ranked 19th in the nationwide entrance exam for B.Sc, Distinguished Student Award

EXPERIENCE

Brown University **September 2020 - Present**
PIs: Stefanie Tellex, George Konidaris and Daniel Ritchie
- Endowing AI agents with the ability to build mental models of the environment and perform delicate interactions

Research Assistant, Massachusetts Institute of Technology, *Cambridge, MA* **April 2016 - August 2020**
PI: Joshua Tenenbaum, Computational Cognitive Science Lab
- Building more human-like computational models of perception in 3D via inverse graphics
  - Built a computational model of perception that uncovers objects draped by cloth with human-like behavior
  - Building a Bayesian model for face recognition that allows face recognition in the wild
  - Built a generative model for 3D objects (github.com/Amir-Arsalan/Synthesize3DviaDepthOrSil)

Research Assistant, State University of New York at Buffalo, *Buffalo, NY* **September - December 2015**
PI: Venu Govindaraju, Center for Unified Biometrics and Sensors
- Built an LDA-based model to do author name disambiguation for multiple departments at SUNY at Buffalo
- Modeled battery charging patterns for hundreds of mobile phone users with HMMs

MANUSCRIPTS IN PREPARATION

Yildirim, I.*, Siegel, M.*, **Soltani, A**.*, Chaudhuri, S. & Tenenbaum, J. "Seeing 3D shape under complete occlusion: Evidence for the use of physics-based generative model simulations during ongoing perception"

* indicates equal contribution

PEER-REVIEWED PUBLICATIONS

Egger B., Siegel M., Arora R., **Soltani AA**., Yildirim I. & Tenenbaum J. "Inverse Rendering Best Explains Face Perception Under Extreme Illuminations ", Abstract, CogSci 2020

Ullman T., Kosoy E., Yildirim I., **Soltani AA**., Siegel M., Tenenbaum J. & Spelke E. "Draping an Elephant: Uncovering Children's Reasoning About Cloth-Covered Objects", CogSci 2019.

Soltani, AA., Huang, H., Wu, J., Kulkarni, T. & Tenenbaum, J. "Synthesizing 3D Shapes via Modeling Multi-View Depth Maps and Silhouettes with Deep Generative Networks", CVPR 2017.

INVITED TALKS

Vision Meets Cognition Workshop, CVPR, *Honolulu, HI* **July 2017**
MIT Vision Seminar, Massachusetts Institute of Technology, *Cambridge, MA* **October 2017**

SERVICE

Reviewer, Asian Conference on Computer Vision (ACCV) **2018**
Reviewer, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops **2019-2020**
Reviewer, Neural Information Processing Systems (NeurIPS) **2019-2020**
Reviewer, International Conference on Machine Learning (ICML) **2021**

COMMUNITY SERVICE

Co-Founder, I Am Better, *Esfahan, Iran* **July 2008 - July 2011**

- Founded an association in Iran to propagate good manners in driving among Iranian people

Science Teacher, Science is Elementary, *Buffalo, NY* **July - December 2015**

- Taught science lessons and visualized abstract concepts to students at a local elementary school