Amir Arsalan Soltani

Computer Science PhD Student | Inspired by Cognitive Science | Interested in 3D Computer Vision

@ arsalan@brown.edu   +1 (716)535-7729   Providence, RI   http://amir-arsalan.github.io

- United States Permanent Resident - Employment Authorized

Education

Brown University
Doctor of Philosophy, Computer Science

 September 2020 – Ongoing   Providence, RI

State University of New York at Buffalo
Master of Science, Computer Science

 Graduated in December 2015   Buffalo, NY

- Concentration: Machine Learning

Islamic Azad University
Bachelor of Science, Computer Software Engineering

 Graduated in May 2012   Najafabab, Iran

- Ranked 19 in the nationwide entrance exam for B.Sc
- Distinguished Student Award

Research Experience

Brown University
PhD Student, Department of Computer Science

 September 2020 – Present   Providence, RI

- Endowing AI agents with the ability to build mental models of the environment and perform delicate interactions

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Massachusetts Institute of Technology
Research Assistant, Computational Cognitive Science Lab

 April 2016 – August 2020   Cambridge, MA

- Developed an inverse graphics model that allows AI agents to use their understanding of objects and physics and recognize objects draped with cloth
- Built a generative model for 3D objects to endow AI agents with a basic understanding of objects
- Built a Bayesian model for face recognition that allows face recognition in the wild

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State University of New York at Buffalo
Research Assistant, Center for Unified Biometrics and Sensors

 September 2015 – December 2015   Buffalo, NY

- 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

Skills

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

Invited Talks

Vision Meets Cognition Workshop
Computer Vision and Pattern Recognition (CVPR)

 July 2017   Honolulu, HI

MIT Vision Seminar
Massachusetts Institute of Technology

 October 2017   Cambridge, MA

Publications

Inverse Rendering Best Explains Face Perception Under Extreme Illuminations
Egger B., Siegel M., Arora R., Soltani AA., Yildirim I. and Tenenbaum J.

 2020
 Cognitive Science Society(CogSci)

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

 2019
 Cognitive Science Society(CogSci)

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

 2017
 Computer Vision and Pattern Recognition(CVPR)