Arman Maesumi · arman_maesumi@brown.edu · armanmaesumi.github.io

EDUCATION

Brown University — Sept '21 - Present
Doctor of Philosophy, Computer Science — GPA: 4.00
Advisor: Professor Daniel Ritchie

The University of Texas at Austin — Aug '18 - Aug '21
Bachelor of Science, Computer Science

EXPERIENCE

Adobe Research — May '22 - Present
Research Scientist Intern, Mentor: Sören Pirk

Brown University — Sept '21 - Present
Research Assistant, Advisor: Prof. Daniel Ritchie
Exploring 3D shape synthesis and deformation using generative neural networks.

UT Austin · Computational Visualization Center (CVC) — Aug '20 - Dec '20
Undergraduate Researcher, Advisor: Prof. Chandrajit Bajaj
Learning 3D Adversarial Cloaks for Deep Object Detectors [PDF]

- Proposed an adversarial attack method that cloaks humans from object detectors.
- Synthesized adversarial textures on 3D human meshes w/ differentiable rendering.
- Demonstrated the robustness of our adversarial attack under various conditions.

UT Austin — May '19 - June '20
Undergraduate Researcher, Advisor: Prof. Chandrajit Bajaj
Playing Chess with Limited Look Ahead [PDF]

- Developed a neural network architecture that learns to evaluate chess positions.
- Created a dataset of ∼25 million chess positions using Stockfish as a black box.
- Showed that the model can accurately approximate Stockfish in various positions.

Zilliant — May '19 - Jan '20, May '20 - Aug '20
Software Developer Intern
Developed a microservice that dynamically provisions AWS clusters when needed.

- Developed a microservice that dynamically provisions AWS clusters when needed.
- Built a product feature that integrates Zilliant's products with Microsoft Excel.

UT San Antonio — May '17 - Nov '19
Undergraduate Researcher, Advisor: Prof. Cody Patterson
Triangle Inscribed-Triangle Picking [PDF]

- Derived the probability density function and moments of the area of stochastically generated inscribed triangles. Moments of the area are listed in OEIS A279055.
- Presented preliminary findings at Texas Undergraduate Mathematics Conference.
- Published paper in The College Mathematics Journal, 2019.

PUBLICATIONS

Triangle Inscribed-Triangle Picking
Google Scholar
Arman Maesumi, *The College Mathematics Journal*, 50:5, 364-371, 2019

MANUSCRIPTS

Learning Transferable 3D Adversarial Cloaks for Deep Trained Detectors
Arman Maesumi*, Mingkang Zhu*, Yi Wang, Tianlong Chen, Zhangyang Wang, Chandrajit Bajaj, 2020

Playing Chess with Limited Look Ahead
Arman Maesumi, 2020

HONORS & AWARDS

NSF Graduate Research Fellowship (GRFP) April '22

University Honors, Dean's List, President's List 2020, 2018, 2017

MD5 Hackathon: 1st Place Entry 2017
Awarded $15,000 grant from Department of Defense

SKILLS

Programming Languages
Python, Go, Java, C/C++, JavaScript, TypeScript, Mathematica

Tools & Technologies
PyTorch, TensorFlow, Keras, PyTorch3D, NumPy, Git, LaTeX, Linux, Docker

Computer Graphics
OpenGL, WebGL, GLSL, Three.js, Blender, Cinema 4D, Octane Render, RealFlow

---

PERSONAL PROJECTS

3D Art Portfolio
https://www.behance.net/armanmaesumi

GitHub

Real-time Fractal Explorer (*OpenGL/WebGL, JavaScript*) 2021
An interactive fractal renderer for both 2D and 3D fractals

Vodder.gg (*Python, JavaScript, Flask*) 2020
A highlight detection service and tool suite for Twitch.tv livestreams

National Autonomous Relief and Aid (*Python, JavaScript*) 2017
A Facebook chatbot that provides relief and aid during natural disasters