

Arman Maesumi

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EDUCATION

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

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

EXPERIENCE

Adobe Research (Remote) May '22 - Present
Research Scientist Intern, Mentor: Sören Pirk

UT Austin, Computational Visualization Center Aug '20 - Dec '20
Undergraduate Researcher, Advisor: Professor 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: Professor 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, Austin TX May '19 - Jan '20, May '20 - Aug '20
Software Developer Intern

- Created a company-wide solution that supplies start-up parameters to clusters.
- 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: Professor 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*, Mingkan 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** 2022 - Present

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, L^AT_EX, Linux, Docker

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

PERSONAL PROJECTS

[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