

# Mohammad Reza Taesiri

Unit 308 , 8015 106 St, NW, Edmonton, Canada

mtaesiri@gmail.com • +1 (438) 303-8905 • <https://taesiri.ai> • [Google Scholar](#) • [Github](#) • [Hugging Face](#)

## EDUCATION

**University of Alberta**, Edmonton, Alberta, Canada

- Ph.D. in Software Engineering and Intelligent Systems Sep 2021 – Present

**Sharif University of Technology**, Tehran, Tehran, Iran

- M.Sc. in Computer Software Engineering Sep 2015 – Sep 2017

**Amirkabir University of Technology**, Tehran, Tehran, Iran

- B.Sc. in Pure Mathematics Sep 2009 – Jun 2015

## RESEARCH EXPERIENCE

**La Forge**, Ubisoft Montreal

- Research and Development Intern Aug 2022 – Dec 2022
  - Supervisor: Dr. Sarra Habchi
  - Focus: Robustness of Foundation Models, Image and Video Retrieval

**ASGAARD Lab**, University of Alberta

- Graduate Research Assistant Sep 2021 – Present
  - Supervisor: Prof. Cor-Paul Bezemer
  - Focus: Foundation Models for Video Games, Robustness

**Nguyen Lab**, Auburn University

- Visiting Researcher Mar 2021 – Present
  - Supervisor: Prof. Anh Nguyen
  - Focus: Robust and Explainable Machine Learning

## PUBLICATIONS

### CONFERENCES

- [1] Giang Nguyen\*, [Mohammad Reza Taesiri\\*](#), and Anh Nguyen (\* Denotes Equal Contribution) – “Visual correspondence-based explanations improve AI robustness and human-AI team accuracy.” in *Thirty-sixth Annual Conference on Neural Information Processing Systems (NeurIPS 2022)*
- [2] Finlay Macklon, [Mohammad Reza Taesiri](#), Markos Viggiano, Stefan Antoszko, Natalia Romanova, Dale Paas, and Cor-Paul Bezemer – “Automatically Detecting Visual Bugs in HTML5 <canvas> Games.” in *International Conference on Automated Software Engineering (ASE 2022)*
- [3] [Mohammad Reza Taesiri](#), Finlay Macklon, and Cor-Paul Bezemer – “CLIP meets GamePhysics: Towards bug identification in gameplay videos using zero-shot transfer learning.” in *The Mining Software Repositories conference (MSR 2022)*

### PREPRINTS

- [4] [Mohammad Reza Taesiri](#), Giang Nguyen, Sarra Habchi, Cor-Paul Bezemer, and Anh Nguyen – “Zoom is what you need: An empirical study of the power of zoom and spatial biases in image classification” in *Arxiv Preprint*
- [5] [Mohammad Reza Taesiri](#), Finlay Macklon, Yihe Wang, Hengshuo Shen, and Cor-Paul Bezemer – “Large Language Models are Pretty Good Zero-Shot Video Game Bug Detectors.” in *Arxiv Preprint*
- [6] MohammadAmin Fazli\*, Ali Owfi\*, and [Mohammad Reza Taesiri\\*](#) (\* Denotes Equal Contribution) – “Under the Skin of Foundation NFT Auctions.” in *Arxiv Preprint*

### JOURNALS

- [7] [Mohammad Reza Taesiri](#), Moslem Habibi and MohammadAmin Fazli – “A Video Game Testing Method Utilizing Deep Learning” in *Journal on Computer Science and Engineering (JCSE 2021)*

## AWARDS & SCHOLARSHIPS

- Graduate Research Assistant, University of Alberta 2021
- Ranked 10th, National entrance exam in Software Engineering, Iran 2015
- Ranked 11th, National entrance exam in Algorithms and Theory of Computation, Iran 2015

<b>PROJECTS &amp; DEMOS &amp; DATASETS</b>	<p><b>ImageNet-Hard</b>, Hugging Face Datasets</p> <ul style="list-style-type: none"> <li>▪ Introduced a challenging dataset to rigorously assess the robustness of diverse vision models. Apr 2023</li> </ul> <p><b>Claude Reads ArXiv</b>, Hugging Face Space</p> <ul style="list-style-type: none"> <li>▪ Harnessing the power of the <i>Claude-v1.3-100k</i> to answer questions about academic papers. Apr 2023</li> </ul> <p><b>Intelligent Image Captioner</b>, Hugging Face Spaces</p> <ul style="list-style-type: none"> <li>▪ Empowering ChatGPT with the ability to see and interpret images, using Detic. Dec 2022</li> </ul> <p><b>CLIP Meets GamePhysics</b>, Hugging Face Spaces</p> <ul style="list-style-type: none"> <li>▪ Built a CLIP-based video retrieval system for video games. Mar 2022</li> </ul> <p><b>The GamePhysics Dataset</b>, Hugging Face Datasets</p> <ul style="list-style-type: none"> <li>▪ A dataset of video game bugs Jan 2022</li> </ul>
<b>OTHER WORK EXPERIENCE</b>	<p><b>3-Dish</b>, Karaj, Tehran, Iran</p> <ul style="list-style-type: none"> <li>▪ Co-Founder 2019 – 2021 <ul style="list-style-type: none"> <li>• Successfully developed a unique culinary experience in the Metaverse, replicating popular dishes with an authentic appearance.</li> </ul> </li> </ul> <p><b>Fanafzar Sharif Game Studio</b>, Tehran, Tehran, Iran</p> <ul style="list-style-type: none"> <li>▪ Summer Intern - Game Development Jun 2014 – Sep 2014 <ul style="list-style-type: none"> <li>• Developed in-game level editors for mobile platforms, enhancing user experience and engagement.</li> <li>• Successfully created a proof of concept using the Unity game engine, showcasing the functionality and potential of the level editor.</li> </ul> </li> </ul>
<b>TEACHING EXPERIENCE</b>	<p><b>Sharif University of Technology</b>, Tehran, Tehran, Iran</p> <ul style="list-style-type: none"> <li>▪ Teaching Assistant - Head Jan 2016 – Jun 2016 <ul style="list-style-type: none"> <li>• Led a team of teaching assistants for the Discrete-Event Simulation course</li> <li>• Collaborated with the professor to develop lesson plans, assess students' performance</li> </ul> </li> </ul>
<b>CERTIFICATES &amp; ONLINE COURSES</b>	<ul style="list-style-type: none"> <li>▪ Deep Reinforcement Learning Nanodegree, Udacity 2020</li> <li>▪ Reinforcement Learning Specialization, Coursera, University of Alberta 2020</li> <li>▪ Computational Neuroscience, Coursera, University of Washington 2020</li> <li>▪ Deep Learning Specialization, Coursera, DeepLearning.AI 2018</li> <li>▪ Image and video processing, Coursera, Duke University 2014</li> <li>▪ Heterogeneous Parallel Programming, Coursera, University of Illinois Urbana-Champaign 2014</li> <li>▪ Programming Languages, University of Washington 2014</li> </ul>
<b>SKILLS</b>	<p><b>Machine Learning:</b> PyTorch, Tensorflow, Tensorflow.js, Keras, Numpy, JAX</p> <p><b>Programming:</b> Python, C#, Java, C/C++, Swift, Objective-C, Scheme, Racket, ML, CUDA</p> <p><b>Other Technologies:</b> Docker and Kubernetes, Node, MongoDB, Neo4j, Wolfram Mathematica, Solidity</p> <p><b>Game Engines:</b> Unity, Unreal Engine</p>
<b>HOBBIES</b>	Photogrammetry, Digital photography, Hiking
<b>REFERENCES</b>	<ul style="list-style-type: none"> <li>▪ <b>Dr. Cor-Paul Bezemer</b> Associate Professor, University of Alberta Edmonton, Alberta, Canada bezemer@ualberta.ca</li> <li>▪ <b>Dr. Anh Nguyen</b> Assistant Professor, Auburn University Auburn, Alabama, USA anhnguyen@auburn.edu</li> <li>▪ <b>Dr. Marek Reformat</b> Professor, University of Alberta Edmonton, Alberta, Canada reformat@ualberta.ca</li> </ul>

[CV compiled on 2023-05-30]