

Mohammad Reza Taesiri

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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

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