AINAZ EFTEKHAR

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EDUCATION

University of Washington (UW)   Seattle, WA
Ph.D. in Computer Science and Engineering   09/2022 - present
- **GPA: 3.8/4.0**, Advisor: **Prof. Ali Farhadi** and **Prof. Ranjay Krishna.**

Ecole Polytechnique Federale de Lausanne (EPFL)   Lausanne, Switzerland
Visiting Student Researcher in VILAB   09/2021 - 08/2022
- Advisor: **Prof. Amir Zamir**

Sharif University of Technology   Tehran, Iran
B.S. in Computer Engineering   09/2017 - 08/2022
- **GPA: 19.22/20**

PUBLICATIONS

The One RING: a Robotic Indoor Navigation Generalist
Ainaz Eftekhar, Luca Weihs, Rose Hendrix, Ege Caglar, Jordi Salvador, Alvaro Herrasti,   Submitted to CVPR 2025
Winson Han, Eli VanderBil, Aniruddha Kembhavi, Ali Farhadi, Ranjay Krishna, Kiana Ehsani, Kuo-Hao Zeng.

Selective Visual Representations Improve Convergence and Generalization for Embodied-AI
Ainaz Eftekhar*, Kuo-Hao Zeng*, Jiafei Duan, Ali Farhadi, Ani Kembhavi, Ranjay Krishna.   **ICLR 2024 (Spotlight)**

Omnidata: A Scalable Pipeline for Making Multi-Task Mid-Level Vision Datasets from 3D Scans
Ainaz Eftekhar*, Alexander Sax*, Jitendra Malik, Amir Zamir.   **ICCV 2021**

Puzzle-AE: Novelty Detection in Images through Solving Puzzles
Mohammadreza Salehi, Ainaz Eftekhar*, Niousha Sadjadi*, Mohammad Hossein Rohban, Hamid R. Rabiee   Arxiv, 2020

WORK EXPERIENCE

Allen Institute for Artificial Intelligence (AI2)   Seattle, WA
Research Intern, Supervisors: Kuo-Hao Zeng, Kiana Ehsani   06/2024 – present
- [Team] Perceptual Reasoning and Interaction Research (PRIOR)
- [Project] The One RING: a Robotic Indoor Navigation Generalist (*submitted to CVPR 2025*): An embodiment-agnostic policy, trained solely in simulation with diverse randomly initialized embodiments at scale, with robust performance on various real unseen robot platforms

Allen Institute for Artificial Intelligence (AI2)   Seattle, WA
Research Intern, Supervisors: Ani Kembhavi, Ranjay Krishna   06/2023 – 09/2023
- [Team] Perceptual Reasoning and Interaction Research (PRIOR)
- [Project] Selective Visual Representations for Embodied-AI (*accepted at ICLR 2024*): a parameter-efficient approach to selectively filter visual stimuli for Embodied-AI tasks (inspired by selective attention in humans)

Ecole Polytechnique Federale de Lausanne (EPFL)   Lausanne, Switzerland
Research Intern, Supervisor: Amir Zamir   09/2020 – 08/2022
- Visual Intelligence and Learning Lab (VILAB)
- [Project] Omnidata: A Pipeline for Making Multi-Task Mid-Level Vision Datasets (*accepted at ICCV 2021*): a pipeline to generate "steerable" multi-task vision datasets by parametrically sampling and rendering 3D scans, providing a pathway to explore various data sampling effects and create better vision datasets.

Sharif University of Technology   Tehran, Iran
Research Assistant, Mohammad Hossein Rohban   09/2019 – 09/2020
- [Project] Self-Supervised Approaches for Anomaly/Novelty Detection in Images and Videos

Indian Institute of Technology (IIT)   Kharagpur, India
Research Intern, Supervisors: Abir Das, Pabitra Mitra   07/2019-09/2019
- [Project] Reducing effects of severe dataset imbalance using an end-to-end CycleGAN-Classifier architecture

HONORS AND AWARDS

UW + Amazon Science Hub Fellowship,	2024
EPFL Summer Research Fellowship, Ecole polytechnique federale de Lausanne	2021
Top 5% Academic Ranking, Sharif University of Technology	2020
Ranked 92th in Iranian Nationwide University Entrance Exam (Among +300,000),	2017
Bronze Medal, Iranian National Math Olympiad	2015, 1016
Gold Medal in the 9th International Mathematics Contest, IMC (Singapore) **[certificate]**	2013

TEACHING EXPERIENCE

University of Washington
Deep Learning   Winter 2024

Sharif University of Technology
Artificial Intelligence, Discrete Structures, Data Structures and Algorithms, Advanced Programming   2018-2020

SKILLS

Programming: Python, Java, C/C++, LaTeX
Machine Learning Tools: PyTorch, OpenCV, scikit-learn, NumPy, pandas, matplotlib
Distribution and Deployment Tools: Kubernetes, Docker, Github's CI/CD
Languages: Persian (native), English (advanced, TOEFL score:109), French (Basic)

RELEVANT COURSEWORK

University of Washington
- *Deep Robotic Learning (CSE 599 G), Deep Learning (CSE 493G1), Computational Neuroscience (CSE 528 A)*

Sharif University of Technology
- *Digital Image Processing (graduate), Artificial Intelligence, Machine Learning, Signals and Systems, Advanced Information Retrieval, Linear Algebra, Probability and Statistics, Design of Algorithms, Data Structures*

Online MOOCs
- *CS231n: Convolutional Neural Networks for Visual Recognition by Stanford, Deep Learning Specialization by deeplearning.ai, Machine Learning by Stanford-Online.*

Machine Vision and Learning Winter School
- *Brain Engineering Center and Cognitive Science School, IPM, Iran **[certificate]***

ACADEMIC SERVICES

Reviewer of CVPR 2024   12/2023
Reviewing 3 papers in Embodied-AI and Computer Vision

Student Volunteer at ICCV 2023   10/2023
*Helped with different logistic tasks at the conference **[certificate]***

Member of Executive Team in Sharif Artificial Intelligence Challenge   03/2018
Sharif University of Technology

Member of Executive Team in the ACM International Collegiate Programming Contest   12/2017
Sharif University of Technology