

# AINAZ EFTEKHAR

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## EDUCATION

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### University of Washington (UW)

Seattle, WA

Ph.D. in Computer Science and Engineering

09/2022 - present

- GPA: 4.0/4.0, 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

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### Selective Visual Representations Improve Convergence and Generalization for Embodied-AI

*Ainaz Eftekhara\*, Kuo-Hao Zeng\*, Jiafei Duan, Ali Farhadi, Ani Kembhavi, Ranjay Krishna.*

Submitted to ICLR 2024

### Omnidata: A Scalable Pipeline for Making Multi-Task Mid-Level Vision Datasets from 3D Scans

*Ainaz Eftekhara\*, Alexander Sax\*, Jitendra Malik, Amir Zamir.*

ICCV 2021

### Puzzle-AE: Novelty Detection in Images through Solving Puzzles

*Mohammadreza Salehi, Ainaz Eftekhara\*, Niousha Sadjadi\*, Mohammad Hossein Rohban, Hamid R. Rabiee*

Arxiv, 2020

## WORK EXPERIENCE

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### 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 (*In Submission to 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
- Self-supervised approaches and adversarial robust training for anomaly 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 CycleGANs
- Reducing the effect of dataset imbalance by training an end-to-end CycleGAN-Classifer architecture

## HONORS AND AWARDS

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

## TEACHING EXPERIENCE

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<b>University of Washington</b> <i>Deep Learning</i>	Winter 2024
<b>Sharif University of Technology</b> <i>Artificial Intelligence, Discrete Structures, Data Structures and Algorithms, Advanced Programming</i>	2018-2020

## SKILLS

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**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

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- 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

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<b>Reviewer of CVPR 2024</b> <i>Reviewing 3 papers in Embodied-AI and Computer Vision</i>	12/2023
<b>Student Volunteer at ICCV 2023</b> <i>Helped with different logistic tasks at the conference [certificate]</i>	10/2023
<b>Member of Executive Team in Sharif Artificial Intelligence Challenge</b> <i>Sharif University of Technology</i>	03/2018
<b>Member of Executive Team in the ACM International Collegiate Programming Contest</b> <i>Sharif University of Technology</i>	12/2017