# AINAZ EFTEKHAR

■ ainazeft@cs.washington.edu

ainaz99.github.io

### **EDUCATION**

### **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

09/2021 - 08/2022

Visiting Student Researcher in VILAB

• Advisor: **Prof. Amir Zamir** 

# **Sharif University of Technology**

Tehran, Iran

**B.S.** in Computer Engineering

09/2017 - 08/2022

• GPA: 19.22/20

### **PUBLICATIONS**

# 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: 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-Classifier architecture

### HONORS AND AWARDS

EPFL Summer Research Fellowship, Ecole polytechnique federale de Lausanne	2021
Top 5% Academic Ranking, Sharif University of Technology	2020
Ranked 92 <sup>th</sup> 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  Helped with different logistic tasks at the conference [certificate]	10/2023
Member of Executive Team in Sharif Artificial Intelligence Challenge Sharif University of Technology	03/2018
Member of Executive Team in the ACM International Collegiate Programming Contest Sharif University of Technology	12/2017