Aarash Feizi

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INTERESTS

- Multimodal Learning
- Agentic AI
- Reinforcement Learning
- Real-World Applications

EDUCATION

MCGILL UNIVERSITY
Ph.D. in Computer Science

2019 - present | Montréal, Canada

GPA: 4/4

SHARIF UNIVERSITY OF TECH.
B.Sc. in Software Engineering

2014 - 2019 | Tehran, Iran

GPA: 18.87/20

HONORS

Received the **Fonds de recherche du Québec – Nature et technologies (FRQNT)** doctoral scholarship **2022**

Received **Graduate Research Enhancement and Travel (GREAT)** Award **2022**

Ranked 3rd in **DataJam Against Exploitation Canada** competition **2021**

Received **School of Computer Science Scholarship** from Mila, Quebec AI Institute **2019**

Ranked 100th out of over 220,000 students in the National University Entrance Exam **2014**

SKILLS

PROGRAMMING
Python • R • Java • Matlab • LaTeX

FRAMEWORKS
HuggingFace • PyTorch • Lightning • TensorFlow • Keras • NetworkX

WORK EXPERIENCE

SERVICENOW | Visiting Researcher
2024-Present | Montreal, Canada

- Researching large vision-language models (VLMs) for real-world applications in web agents and web understanding.
- Developing benchmarks to evaluate the reliability of VLMs.

RECURSION | Machine Learning Research Intern
Summer-Fall 2023 | Montreal, Canada

- Designed models to learn gene representations for data-centric drug discovery.
- Applied multi-modal models with self-supervised learning techniques to integrate sequential and visual modalities for gene-perturbation analysis.

UNIVERSITY OF TORONTO | Research Assistant
Summer 2018 | Toronto, Canada

- Worked in a group under the supervision of Professor Plataniotis.
- Project goal was to improve the robustness of convolutional neural networks (CNNs) against adversarial attacks.

PROJECTS AND PAPERS

PAIRBENCH: ARE VISION-LANGUAGE MODELS RELIABLE AT COMPARING WHAT THEY SEE?
Spring 2025

- Developed a framework for evaluating Vision-Language Models (VLMs) as similarity kernels using four key metrics.
- Demonstrated the importance of thorough assessment before adopting VLMs for evaluation tasks.

GUIDED POSITIVE SAMPLING FOR SELF-SUPERVISED LEARNING (GPS-SSL)
Winter 2024

- Introduced a novel positive sampling strategy to reduce reliance on handcrafted augmentations in SSL models.
- Enabled SSL models to perform comparably or better than augmentation-heavy methods, improving real-world dataset adaptability.

BIGDOCS-7.5M: A LARGE-SCALE DATASET FOR DOCUMENT UNDERSTANDING
Fall 2024

- Created an open-access dataset with 7.5 million multimodal documents for document understanding tasks.
- Demonstrated that models trained on BigDocs-Bench improved document reasoning performance by up to 25.8% over GPT-4o.

FAIRLORA: BIAS MITIGATION IN VISION MODELS WITH FAIRNESS-DRIVEN LOW-RANK ADAPTATION
Fall 2024

- Developed FairLoRA, a fairness-specific regularizer for LoRA that minimizes performance disparities across data subgroups.
- Achieved comparable or better fairness performance than full fine-tuning while maintaining efficiency across models and datasets.