

Alireza Dizaji

Curriculum Vitae

Tehran
Iran

 [alirezadizaji.github.io](https://github.com/alirezadizaji)

Born on March 17th 1999 - Tehran, Iran

Education

- Starts Sep 2023 **Ph.D. student**, *Québec Artificial Intelligence Institute (MILA)*.
- Starts Sep 2023 **Ph.D. student**, **DIRO department**, *Université de Montréal*.
- Sep 2017–Oct 2022 **BSc. computer engineering department**, *Sharif University of Technology*, Tehran,
17.93 out of 20, Last eight semesters' avg. : 18.53 out of 20.
Thesis: Tumor detection in mammography screening using semi-supervised methods, under the supervision of prof. Rabiee (Grade 19.8/20)

Honors and Rewards

- 2023 Annual scholarship, Université de Montréal
- 2017 Ranked 37th nationwide in Iran national university entrance exam, called Konkur, Physics and mathematics field.

Research Experience

- Dec. 2022 - **Undergraduate Research Assistant**, *Technical University of Munich*, Germany.
- Mar. 2023 After my research internship, I got an offer to work on *spatial-temporal skeleton pose action recognition*, using Graph Neural Networks.
- May 2022 - **Research Intern**, *Technical University of Munich*, Germany.
- Nov. 2022 Several explainer methods have been developed to perceive the functionality of graph neural networks, though currently there is a lack of fair evaluation among them. Contribution of the project is to tackle this issue by formulating retraining framework from vision domain (formally known as KAR and ROAR) into the graph one, under the co-supervision of Prof. Navab and Prof. Rueckert.
- April 2021 - **R&D scientist**, *Comma-Med (former known as AI-Med)*, Iran, Full-time.
- Dec. 2022 Under the supervision of Prof. Rabiee, our mission was to develop an AI assistant product for mammography screening process. I have contributed to a huge project containing multiple sub-branches, including pre and post-image processing, malignancy classification, and lesion segmentation, using mostly weakly and semi-supervised methods due to insufficient annotated data. Mentorship and management of interns are another part of my responsibilities. In addition, For some reasons including making run-time faster, I have transported our python codes to C++, using Libtorch.
- August 2020 - **Undergraduate research assistant**, *Sharif University of Technology*, Iran.
- March 2021 My main responsibility is to research and develop applications of contrastive learning approaches to better assess the movement of an agent within a maze, at (@DML).

Teaching Experience

Sep 2019 - **Computer Engineering department Sharif university, Tehran.**

Sep 2021 In the following, I have listed full of them:

- **Machine learning** (M.Sc. course), Dr. Rohban: spring 2021; Designing one homework and final exam questions both covering reinforcement learning subject.
- **Modern information retrieval**, Dr. Soleymani: spring 2021; I prepared materials for the text classification homework.
- **Artificial intelligence**, Dr. Rohban: fall 2020; Same as machine learning, preparing the last homework in the field of reinforcement learning.
- **Linear algebra**, Prof. Rabiee: fall 2020; designing and mentoring homework for covering eigenvalues and eigenvectors subject
- **Computer architecture**, Prof. Asadi: spring 2020; contributed to project definition covering pipelining , storage and I/O subjects.
- **Data structures and algorithms**, Dr. Safarnezhad: spring 2020; Grading final and mid-term exam sheets.

Related Courses

- Convolutional Neural Networks for Visual Recognition (audited, online Stanford)
- Machine Learning (audited, online Stanford)
- Artificial Intelligence (20/20)
- Intro to BioInformatics(20/20)
- Data Structures and Algorithms (20/20)
- Linear Algebra (18.3/20)
- Modern Information Retrieval (17.7/20)
- Software Engineering (18.5/20)
- Database Design (18.7/20)
- Design of Algorithms (17/20)

Licenses and Certifications

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, *Coursera*, Grade Achieved: 90%, [Click here to see credential](#) .

Convolutional Neural Networks, *Coursera*, Grade Achieved: 97%, [Click here to see credential](#) .

Introduction to Data Science in Python, *Coursera*, Grade Achieved: 90%, [Click here to see credential](#) .

Research Interests

- **Graph Neural Networks, Deep Learning, Tensor networks, Explainability**

Computer Skills

Programming Python, C++, Latex, Java, JavaScript, Android, MySQL

Libraries Pytorch, Libtorch, Keras, Tensorflow, Pandas, Scikit-learn, NumPy, Seaborn, OpenCV