Sajjad Pakdaman Savoji

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EDUCATION

2021–2023 Master of Science in Computer Science, York University.
Supervisor: James Elder Professor and York Research Chair in Human and Computer Vision
GPA: 4/4(A+)

2016–2021 Bachelor of Science in Electrical Engineering, University of Tehran.
GPA: 17.57/20 (3.77/4)

2018–2020 Minor program in Computer Engineering, University of Tehran.
GPA: 18.22/20 (4/4), ranked 2^{nd}

2012–2016 Diploma in Mathematics and Physics, NODET Allameh Helli 8 Branch.
National Organization for Development of Exceptional Talents
GPA: 19.73/20

RESEARCH INTERESTS

Artificial Intelligence, Deep Learning, Machine Learning, Computer Vision, Natural Language Processing, Information Retrieval, Generative Models, Data Science, Reinforcement Learning.

RESEARCH EXPERIENCE

Sep'21–Aug'23 Graduate Research Assistant, York University.
objective: Leveraging Attentive Sensing in Computer Vision Tasks
Supervisor: James Elder, Prof.

Sep'20–Jul'21 Undergradute Research Assistant, University of Tehran.
objective: Manifold learning using ranking loss and siamese-inspired networks)
Supervisor: Ahmad Kalhor, Assoc.Prof.

Sep'19–Sep'20 Undergradute Research Assistant, Computer Networks Lab, University of Tehran.
objective: User-focused activity and bandwidth prediction using recurrent NNs
Supervisor: Vahid Shahmansouri, Asst.Prof.

Jul'19–Sep'19 Research Intern, Secure Communication Lab, University of Tehran.
objective: Iranian Sign Language (ISL) translation from visuals to text using deep NNs
Supervisor: Mohammad Ali Akhaee, Asst.Prof.

AWARDS AND ACHIEVEMENTS

Jun 2021 Lassonde Entrance Scholarship, York University

May 2021 VISTA Graduate Scholarship, Vision: Science to Application

Apr 2021 Vector Scholarship in AI, Vector Institute

Jan 2018 Supporter Foundation of University of Tehran Scholorship

WORK EXPERIENCE

Jul'19–Sep'20 Strategic Advisor, IEEE University of Tehran Student Branch.
Provided branch's executive committee with decisive advice and support

Apr'20–Jun'20 Mentor, Introduction to Python and Data Science, Amirkabir University of Technology.
Prepared course material as well as hands-on content

Nov'19–Jan'20 Mentor, IEEEUTSB Data Science Winter School, University of Tehran.
Held hands-on session and organized the event

Jul'19–Sep'19 Intern, AVIR Company.
Implemented object detective and localization neural networks such as YOLO2

Jul'18–Jul'19 Vice chair, IEEE University of Tehran Student Branch.
Organized the student branch's different Sections and held several workshops, classes, talks, etc.

TECHNICAL SKILLS

Prog. Languages	Python(advance), C++(advance), C, R
Tools	Tensorflow, Keras, Pytorch, scikit-learn, Jupyter, LaTeX, Office programs
Softwares	MATLAB, Modelsim-Altera, Quartus, NI Multisim, Codevision, Proteus, Altium Designer
Digital Devices	AVR ATmeg series, Raspberry Pi3, Arduino
OS.s	Linux, Windows, macOS

TEACHING-RELATED EXPERIENCES

Jan'22–Apr'22 TA, Data Mining.
graduate course *Obligation:* grading projects, assignment, and exams
Instructor: Habib-ur Rehman, Adjunct Prof. at McMaster University

Sep'21–Nov'21 TA, Software Tools.
Obligation: holding hands-on sessions and grading projects
Instructor: Hui Wang, Reasearch Assoc. at York University

Sep'20–Jul'21 TA, Neural Networks and Deep Learning (2 semesters).
graduate course *Obligation:* designed the final project regarding Generative Adversarial Networks
Instructor: Ahmad Kalhor, Assoc.Prof. at University of Tehran

Sep'20–Feb'21 TA, Machine Learning.
graduate course *Obligation:* held hands-on session, designed assignments
Instructor: Babak Nadjar Araabi, Prof. at University of Tehran

Feb'20–Jun'20 TA, Pattern Recognition.
graduate course *Obligation:* held hands-on session, designed 2 homeworks and 3 quizzes
Instructor: Mohammadreza Abolghasemi, Asst.Prof. at University of Tehran

Sep'20–Feb'21 TA, Intelligent systems.
Obligation: designed 6 final projects and marked them, individual assessment
Instructor: Reshad Hoseini, Asst.Prof. at University of Tehran

Feb'20–Feb'21 TA, Digital Signal Processing.
(3 semesters) *Obligation:* designed 4 CAs, one analytical assignment and organized other TAs
Instructor: Hadi Amiri, Asst.Prof. at University of Tehran **(graduate-level course)**
Instructor: Majid Badieirostami, Asst.Prof. at University of Tehran
Instructor: Mohammadali Akhaee, Asst.Prof. at University of Tehran

Sep'19–Feb'21 TA, Communication Systems I.
(3 semesters) *Obligation:* designed 4 homeworks all of which include implementation part and 4 CAs, assessed students
Instructor: Maryam Sabaghian, Asst.Prof. at University of Tehran
Instructor: Hadi Amiri, Asst.Prof. at University of Tehran

Feb'19–Feb'20 TA, Engineering Probability and Statistics.
(2 semesters) *Obligation:* designed homeworks and computer assignments, held Q&A session
Instructor: Mohammadreza Abolghasemi, Asst.Prof. at University of Tehran

Feb'19–Jun'19 TA, Electronics I.
Obligation: marked student's homeworks, mentored them in the problem-solving procedure
Instructor: Mohammadreza Kolahdooz, Asst.Prof. at University of Tehran

CERTIFICATES AND WORKSHOPS

January 2022	Build Better Generative Adversarial Networks (GANs), Coursera Credential: XC3RQE34YAXS
January 2022	Sample-based Learning Methods, Coursera Credential: J4YEGV3VWSQ3
Novermber 2021	Build Basic Generative Adversarial Networks (GANs), Coursera Credential: B9M4EX5HRXG3
October 2021	Fundamentals of Reinforcement Learning, Coursera Credential: DMPL7YR2KURX
Oct 18 - Oct 20	Ambassador for IEEEXtreme 12.0, 13.0, and 14.0 Programming Competition
April 2019	Ambassador for IEEEmadC Competition

PROJECTS

Dec'21	Face Generation. Trained RealNVP, VAE, and DCGAN on CelebA dataset to generate faces
July'21	Machine Translation Using Transformers. Used transformer-based models for English to Persion translation
April'21	Sentiment Analysis with BERT and XLNet. Used transformer-based embedding to detect hate speech
Feb'21	Sentence Generation. Used LSTM-based Language model for sentence generation
September'20	Auxiliary Classifier Generative Adversarial Network (ACGAN). Implemented an ACGAN using Keras on CIFAR10 dataset
August'20	Conditional Generative Adversarial Network (CGAN). Implemented a CGAN using Keras on CIFAR10 dataset
July'20	Deep Convolutional Generative Adversarial Network (DCGAN). Implemented a DCGAN using Keras on CIFAR10 dataset
June'20	Variational Auto Encoder (VAE). Used Kullback-Leibler Divergance cost to tarin a VAE on MNIST dataset
May'20	Pollution Prediction. Implemented several recurrent networks using different cells such as LSTM and GRU
May'20	German Traffic Sign Recognition Benchmark. Used deep convolutional NNs to classify traffic signs
Murch'20	Seperation Index in CNNs. Computed two different methods to examine trends of SI through layers of CNNs
September'19	American Sign Language Translation. Used CNNs and RNNs alongside to develop an alphabet-level translator
August'19	Object Localization. Performed YOLO-based network to localize fishes as well as classify them
June'19	Speech Identification. Used MEL Spectrum features to identify individuals
June'19	Face Recognition. Used the siamese network alongside with triple-loss cost function on AT&T dataset

LANGUAGES

Persian/Farsi	Native
English	Professional Profiency (IELTS Overall 8)