

# Yasmin Niknam

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## EDUCATION

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**Master of Science in Computer Science** Present  
*Western University, London, ON*  
GPA:4/4

**Bachelor of Science in Electrical Engineering** 2016–2021  
Minor in Software Engineering (GPA: 18.43/20)  
*University of Tehran, Tehran, Iran*  
GPA:18.25/20

**High School Diploma in Mathematics and Physics** 2012–2016  
*Farzanehgan1 High School, Ahwaz, Iran*  
GPA:19.83/20

## HONORS AND AWARDS

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- Received Mitacs Accelerate Fellowship of 15K CAD
- Received the University of Tehran M.Sc. Fellowship Award (exempted from the graduate entrance exam)
- Received Best Undergraduate Thesis Award from the University of Tehran
- Ranked 8<sup>th</sup> (among top 10 percent) out of 120 undergraduate students, School of Electrical and Computer Engineering, University of Tehran
- Ranked 111<sup>th</sup> among more than 200,000 participants in Iranian National University Entrance Exam in 2016
- Member of Iran's National Elites Foundation

## ACADEMIC RESEARCH EXPERIENCE

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**Semi-Supervised Domain Adaptation for Regression Task** Present  
Designing and implementing a model capable of learning from a source domain and then perform well on a second domain called target domain.

**Paragraph Generation for Untrimmed Video** Present  
Describing multiple events in untrimmed news videos from Thomson Reuters with descriptive paragraphs. (in collaboration with Vector Institute)

**Cross-Modal Generation** Fall 2021  
Generating corresponding audio of a video using for a variety of categories state-of-the-art deep learning models and transformers.

**Image Restoration** Fall 2020  
Restoring old photos that suffer from severe degradation through training two variational autoencoders (VAEs) to respectively transform old photos and clean photos into two latent spaces.

**Multiple Object Tracking** Fall 2020  
Tracking people in crowded scenes by exploiting the bounding box regression of an object detector to predict the position of an object in the next frame, thereby converting a detector to a tracker.

**Dialogue Generation** Fall 2020  
Implementing RNN, LSTM, and GRU Models to generate text files and conversations.

**Price Estimation** Spring 2020  
Implementing a Regression Model to estimate cellphone prices based on customers' data.

## COMPUTER SKILLS

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**Programming**  
Python, MATLAB, C/C++, Java

**Libraries**  
Pytorch, Tensorflow, Keras, Weights and Biases, Pandas, Numpy, Scikit-learn, Matplotlib, OpenCV, Slurm Workload Manager, Git

**Hardware Design**  
Verilog (Advanced), SystemVerilog (Advanced), ARM (Advanced), AVR (Advanced), Modelsim (Advanced), QuartusII (Advanced), Multisim (Intermediate), Arduino (Intermediate), WireShark (Intermediate), Pspice (Familiar), Proteus (Familiar), Altium (Familiar)

**Typesetting**  
Word (Advanced), L<sup>A</sup>T<sub>E</sub>X(Advanced)

## TEACHING AND WORK EXPERIENCE

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### Internship at Mitacs

2021-2022

Implementation of a three-part model which can generate heatmaps of the cars commuting in a parking lot using data gathered from a drone.

### Internship at HARA AI

2019

Implementation of a system to recognize Persian Music and Singers using Machine Learning methods.

### Teaching Assistant at University of Western Ontario

2021-2022

Holding lab sessions, grading assignments, proctoring and grading exams for courses Computer Science Fundamentals I and II.

### Teaching Assistant and Supervisor at University of Tehran

2018-2021

Designing assignments, exams, and projects, grading exams, holding lab sessions, and managing classes in various courses namely Digital Logic Design, Linear Control Systems, Computer Programming, Digital Signal Processing, Engineering Mathematics, Engineering Probability and Statistics, Communication Systems, and Intelligent Systems.

## LANGUAGES AND TESTS

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Persian (*native*), English (*fluent*)

- IELTS Academic: 8 ( Reading:8.5, Listening:8.5, Speaking:7.5, Writing:6.5 )

## EXTRACURRICULAR ACTIVITIES

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### Musical Studies

2010–Present

Focusing on a classical piano repertoire for over 10 years

### Tedx Keshavarz Boulevard

May 2017

Working as a member of partnership in Tedx Keshavarz Boulevard