Ebrahim **Pichka**

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Personal Website • GitHub • LinkedIn • Medium

Educations

University of Windsor — Windsor, ON, Canada
Master of Applied Science (MSc) • Industrial Engineering (**CGPA:** 4.0/4.0) — Jan 2023 – Sept 2024

(Incoming) Georgia Institute of Technology (Georgia Tech) — Online
Master of Science (MSc) • Computer Science — Part-time

Amirkabir University of Technology (Tehran Polytechnic) — Tehran, Iran
Bachelor of Science • Industrial Engineering (**CGPA:** 3.18/4.0) — Sept 2017 – Dec 2022
- **Thesis:** Algorithmic Trading in Financial Markets using Deep Reinforcement Learning Algorithms.

Experience

Graduate Research Assistant • University of Windsor — Jan 2023 – Present • Windsor, Ontario, Canada
- Researched and studied the intersection of combinatorial optimization and machine learning, Sequential decision-making and deep reinforcement learning, and machine learning on graphs, applied in different domains such as quantitative finance.

Machine Learning Intern • Astyage — Apr 2021 – Sept 2021 • Tehran, Iran
- Contributed to a diverse team of collaboration in researching and developing an intent-based conversational chat-bot system for enterprise customer support management using TensorFlow and transformer-based natural language understanding models.

Data Science Intern • Dayche Data Mining Group — Jan 2021 – Apr 2021 • Tehran, Iran
- Contributed to developing an end-to-end market segmentation system using unsupervised learning methods based on user transactions in a team of interns in python.

Skills

Programming Languages	Python, Julia, C++
Frameworks	
Machine Learning:	PyTorch, JAX, TensorFlow, Keras, TorchRL, scikit-klearn, XGBoost
Data Science & Statistics:	Statsmodels, Pandas, NumPy, SciPy, Dask, Matplotlib, Plotly, Seaborn, SpaCy, NLTK
Optimization:	CVXPy, Gurobipy, PyOmo, HiGHs, SCIP, JuMP, PuLP
Software & Cloud	Linux, Git, Docker, MongoDB, SQL, AWS
Theory & Methodology	Deep Learning, Deep Generative Models, Neural Networks (MLP, CNN, RNN, Graph NN, Transformers, …), NLP, Optimization, Supervised, Unsupervised, and Semi-supervised Learning, Reinforcement Learning (RL), Decision trees, Time Series, Statistical Modeling, Forecasting

Certificates & MOOCs

- **Machine Learning Engineer Nanodegree** - Udacity
- **Deep Learning Specialization** - Coursera (DeepLearning.ai)
- **TensorFlow Developer** - Coursera (DeepLearning.ai)
- **Reinforcement Learning Specialization** - Coursera (University of Alberta/AMII)
- **Machine Learning** - Coursera (Stanford Online)
- **Machine Learning Fundamentals** - DataCamp
- **Deep Learning** - DataCamp
- **Computer Science Fundamentals Specialization** - Coursera (University of Illinois - Urbana-Champaign)

Selected Coursework

- Computational Intelligence (A)
- Data & Information Analysis (Statistical Learning) (A+)
- Principles of Simulation (A+)
- Artificial Intelligence (A+)
- Optimization I (Operations Research I) (A+)
- Optimization II (A)

Awards & Honors

- **AWS Scholarship recipient** for the Machine Learning Engineer Nanodegree tuition exemption from Udacity.
- **Ranked top 1%** in Iran's National University Entrance Exam among more than 160,000 students.

Other

Technical Blogging: Wrote in-depth technical posts on different topics in machine learning and optimization algorithms.
Teaching Experience: Worked as teaching assistant for undergrad and graduate level courses such as Statistics, Operations Research, intelligent systems, and numerical analysis.
Open Source: Contributed to development of open-source projects such as Pytorch, Pytorch-geometric, etc.