Farzad ABDOLHOSSEINI
M.Sc. in Computer Science | B.Sc. in Software Engineering

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✔ SUMMARY

Well-rounded **machine learning** engineer with a broad software engineering background.

Developed several applications from start to finish including MTA, Bluebook, and Arzesh.
Experienced a successful startup exit with Xnor.ai.

🎓 EDUCATION

2017 - 2019	**M.Sc.** in Computer Science at **UBC**. GPA : 4.0
2013 - 2017	**B.Sc.** in Software Engineering at **Sharif University of Technology**. GPA : 18.85/20
2009 - 2013	Diploma in Mathematics and Physics Discipline at Allame Helli High School, Iran. GPA : 19.73/20

☰ SKILLS

Programming	Python, JavaScript, C++, Java
ML Framework	Pytorch, Keras, Tensorflow.js, Torch7 (Lua)
ML Paradigm	Reinforcement Learning, Probabilistic Programming
Data & Scale	Apache Spark, Hadoop, Docker, Graph Databases
Web & UI	React, React Native, Django, Node.js, D3.js
Misc	Linux Administration

💼 RELEVANT PROFESSIONAL EXPERIENCE

Oct 2019 - Jan 2020

Machine Learning Engineer, XNOR.AI, Vancouver, Canada
> Research and implementation of neural architecture search methods for latency minimization.
> Developed a GPU-friendly weighted matching algorithm with possible uses in keypoint estimation.

`Computer Vision` `Deep Learning` `AutoML` `PyTorch`

2016

Data Science Intern, SEERIO [1], Tehran, Iran
> Setup a Hadoop cluster for large-scale data analysis.
> Customer segmentation using classic machine learning for a major Iranian bank.

`Hadoop` `Spark`

2014 - 2015

Back-end Developer, NOAVARAN SARAMAD SHARIF, Tehran, Iran
> Collecting and curating the financial data for *Arzesh*, as well as developing the back-end.
> Arzesh is a financial platform developed for stock traders similar to Google Finance.
> It allows users to create a portfolio, track multiple markets, and play out hypothetical scenarios.

`SQL` `Django`

🎓 HONORS AND AWARDS

2013	**Bronze Medal** in the International Olympiad in Informatics (IOI), Brisbane, Australia.
2012	**Gold Medal** in the 22nd Iranian National Olympiad in Informatics (INOI), Tehran, Iran.
2011	Silver Medal in the 21st Iranian National Olympiad in Informatics (INOI), Tehran, Iran.
2009	Awarded Outstanding Achievement certificate for getting the full mark in the Gauss Mathematics Contest from the University of Waterloo.

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1. Sharif E-Commerce & E-Government Research & Innovation Office

📖 PUBLICATIONS

2019   On Learning Symmetric Locomotion
F. Abdolhosseini, *Hung Yu Ling, Zhaoming Xie, Xue Bin Peng, Michiel van de Panne*. Proc. ACM SIGGRAPH Motion, Interaction, and Games (MIG 2019). Also to appear in the NeurIPS Deep Reinforcement Learning Workshop.
Reinforcement Learning   Computer Animation   Locomotion

2017   Using Deep Neural Networks to Understand the Cell Identity by Expression Fingerprints
F. Abdolhosseini, *A. Maazallahi, A. Kamal, H. Chitsaz, A. Sharifi-Zarchi*. Scientific Reports volume 9, Article number : 2342.
Bioinformatics   Autoencoders   Torch7

2016   Hoffmann-Ostenhof's conjecture for traceable cubic graphs
F. Abdolhosseini, *S. Akbari, H. Hashemi, M.S. Moradian*. ArXiv.
Graph Theory

💻 PROJECTS

LEARNING LOCOMOTION : SYMMETRY AND TORQUE LIMIT CONSIDERATIONS   2019
🔗 M.Sc. Thesis
Development and analysis of reinforcement learning (RL) methods for increasing motion quality in learned locomotion with applications in Computer Graphics and Robotics.
PyTorch   RL   PyBullet   Policy Gradients   Invariant Networks

REINFORCEMENT LEARNING AS INFERENCE   2018
🔗 Link to the source code
A case study on the applicability of solving reinforcement learning tasks when posed as an inference problem. [S. Levine].
Pyro   PyTorch   Pybullet   Probabilistic Programming

SEMI-SUPERVISED LEARNING IN GENERATIVE ADVERSARIAL NETWORKS   2017
🔗 Link to the project report
A review on semi-supervised learning methods which make use of the power of GANs for .

🎓 TEACHING

2017-2019   Teaching Assistant, COMPUTER SCIENCE, UBC
- Machine Learning [CS 340]
- Internet Computing [CS 317]
- Computer Graphics [CS 314]
- Intermediate Algorithm Design and Analysis [CS 320]

2015-2017   Teaching Assistant, COMPUTER ENGINEERING, Sharif University of Technology
- Operating Systems
- Numerical Methods
- Engineering Probability and Statistics
- Design of Algorithms
- Data Structures