

Farzad ABDOLHOSSEINI

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

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I'm a well-rounded computer scientist with strengths in **machine learning** and **reinforcement learning**. I have developed many applications from start to finish including : MTA, Bluebook, and Arzesh.

Expected graduation date : Oct 1st, 2019.

EDUCATION

- 2017 - present **M.Sc. in Computer Science at UBC.** Current 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
Misc Linux Administration

PROFESSIONAL EXPERIENCE

- 2017-2018 **Principal Developer, BLUEBOOK, Tehran, Iran**
 > Developed the applications for Android and iOS
 > Setup and managed the server
 React Native Nginx
- 2016 **Data Science Intern, SEERIO¹, Tehran, Iran**
 > Setup a Hadoop cluster for large-scale data analysis.
 > Customer segmentation using classic machine learning for a major Iranian bank.
 > In collaboration with the Iranian National Bank.
 Hadoop Spark
- 2014 - 2015 **Backend Developer, NOAVARAN SARAMAD SHARIF, Tehran, Iran**
 > Collecting and curating all the required financial data for <http://arzesh.co>, as well as handling 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 SOAP 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.

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. Under Review.
[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

UNDERSTANDING RL FOR LOCOMOTION

IN PROGRESS

M.Sc. Thesis Project (In progress)

Development and analysis of reinforcement learning (RL) algorithms used for solving locomotion tasks in simulation and the transfer to real robots.

Usages include Robotics and Computer Graphics.

[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 of semi-supervised learning methods that use GANs.

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