

Mohammadmahdi Zafarmand

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EDUCATION

University of Alberta

M.Sc. in Computer Science (GPA 3.6/4)

Edmonton, AB

Sep. 2018 – Sep. 2020

University of Tehran

B.Sc. in Electrical Engineering (last year GPA 3.7/4)

Tehran, Iran

Sep. 2012 – Jul. 2017

EXPERIENCE

Graduate Research Assistant

May 2019 – Present

University of Alberta, AMII (Alberta Machine Intelligence Institute)

Edmonton, AB

- Developing Meerkat, a data analytic tool for analyzing changes over time in a network of entities.
- Working on novel approaches to detect communities in deterministic and uncertain social networks.
- Published "Addressing the Resolution Limit and Field of View Limit in Community Mining" [\[Publication Link\]](#)

Graduate Teaching Assistant

Sep. 2018 – Apr. 2020

University of Alberta

Edmonton, AB

- Introduction to Foundations of Computation I & II (CMPUT 174 & 175)
- Responsibilities included attending labs and helping students with assignments, designing assignments, and marking projects and exams.

SELECTED PROJECTS

Fast Local Community Discovery: Relying on the Strength of Links

Fall 2020

- NetworkX implementation for novel community discovery algorithms LSWL and LSWL+.

[\[Github Link\]](#)

Fast Apriori Implementation for Association Rule Mining | C++

Data Mining: Winter 2019

- The most prominent practical application of Apriori algorithm is to recommend products based on the products already present in the user's cart. This is a fast implementation usable for very large databases.

[\[Github Link\]](#)

Analyzing Q-sigma over the Grid World Problem | Python, Numpy

Reinforcement Learning: Winter 2019

- Analyzed and evaluated $Q(\sigma)$, a unifying method between various tabular methods. Performed many experiments to find out how well this method performs in diverse deterministic environments.

[\[Github Link\]](#)

Classification of Wireless Indoor Localization | Python, Scikit-Learn, Numpy

Machine Learning: Fall 2018

- Evaluated different traditional classification algorithms on "Wireless Indoor Localization" dataset.

Web-based Project Management Application | C++

Advanced Programming: Fall 2016

- Implemented a Trello-inspired kanban board containing multiple to-do lists, in which users can add/remove/move, etc. any tasks (without GUI).

Image Mosaic Maker | C++

Advanced Programming: Fall 2016

- The goal of the project was to convert images to mosaic style using a large set of different images.

Implementation of Super Mario Game | C

Introduction to Computer and Programming: Fall 2012

- Implemented the classic Nintendo game to be played in the terminal.

SKILLS

Languages: Python (3 years), C/C++ (3+ years), Java

Machine Learning / Deep Learning Libraries: Scikit-Learn, Numpy, Scipy, Pytorch, TensorFlow, Keras

DataBases: SQL, MySQL, Pandas

Cloud Computing Platforms: Familiar with Amazon Web Services (AWS) and Google Cloud Platform

Developer Tools: Git, Docker, Linux, Networkx, Matplotlib, VS Code, PyCharm, Jupyter Notebook, Eclipse

Personality: Quick learner and team player who can also work independently

ONLINE CERTIFICATES

Deep Learning Specialization: [\[Certificate Link\]](#)

DeepLearning.AI TensorFlow Developer: [\[Certificate Link\]](#)

IBM AI Engineering Professional Certificate: [\[Certificate Link\]](#)

Applied Data Science with Python Specialization: [\[Certificate Link\]](#)