

EDUCATION

McMaster University

M.A.Sc. in Computational Science and Engineering, supervised by Dr H. Mahyar

Hamilton, ON, Canada

Starting Sept. 2022

Sharif University of Technology - Kish International Campus

B.Sc. in Computer Engineering, GPA: 17.78/20 (3.83/4.0)

Kish, Iran

2017–2022

SELECTED COURSES

• Artificial Intelligence	19.8/20
• Complex Dynamic Networks	17.5/20
• Engineering Probability and Statistics	17.7/20
• Advanced Programming	19/20
• Numerical Computations	19.3/20
• Computer Simulation	19.2/20

RESEARCH INTERESTS

- **Graph Representation Learning**
- **Natural Language Processing**
- **Data Mining**
- **Reinforcement Learning**

AWARDS AND HONORS

- Vector Scholarship in Artificial Intelligence Recipient 2022-23
- Ranked within the top 5% among B.Sc. Computer Engineering students
- Distinguished student in Computer Engineering Department

RESEARCH EXPERIENCE

- Research Assistant, McMaster University, Hamilton, ON, Canada 2021-present
Remotely working as research assistant in Dr. Hamidreza Mahyar's lab on scalable and distributed graph representation learning using graph neural networks
- Multi-grid Project, Sharif University of Technology, Kish International Campus 2020
Using traditional methods, it is computationally expensive to solve large sparse linear systems of equations. To address this issue, multi-grid methods are employed. We did research on applying graph representation learning methods to multi-grid solvers.

PUBLICATIONS AND PRE-PRINTS

- [1] **R. Namazi**, E. Ghalebi, S. Williamson, and H. Mahyar, *SMGRL: A Scalable Multi-resolution Graph Representation Learning Framework*, Code: <https://github.com/rezanmz/SMGRL>, 2022. arXiv: 2201.12670.
- [2] **R. Namazi**, A. Zolanvari, M. Sani, and S. A. A. G. Ghahramani, *GL-Coarsener: A Graph representation learning framework to construct coarse grid hierarchy for AMG solvers*, Code: <https://github.com/rezanmz/GL-Coarsener>, 2020. arXiv: 2011.09994.

PROJECTS

- Graph Neural Network Architecture Search
This project's purpose is to optimise hyper-parameter tuning of graph neural networks in a large search space. To speed up the process, we first search a low-resolution version of the training graph, then increase the network's quality on a zoomed-in version of the same graph. The search is done using Optuna. Code available at <https://github.com/rezanmz/GNN-NAS>
- Molecule generation using Graph Convolutional Network (GCN)
Using GCN in a GAN-like setting, I trained a generative model that outputs the structure of molecules similar to the seen training data. Code available at <https://github.com/rezanmz/MolGenerator>
- Modeling Epidemics
In this project I tried to analyze an epidemic with infection rate α and recovery rate β in an SIS (Susceptible - Infected - Susceptible) model.
- A naive implementation of a two-grid multigrid algorithm
*Solve very large sparse linear systems using a Python and C++ implementation of the multigrid algorithm. Python code available at <https://github.com/rezanmz/AMG>
C++ code available at <https://github.com/rezanmz/multigrid>*

TEACHING EXPERIENCE

- **Teaching Assistant** at Sharif University of Technology, Kish International Campus March 2020
Numerical Methods (50072)
Weekly training sessions, designing homeworks and final course project
- **Teaching Assistant** at Sharif University of Technology, Kish International Campus October 2019
Engineering Probability and Statistics (50063)
Weekly training sessions and designing homeworks
- **Teaching Assistant** at Sharif University of Technology, Kish International Campus March 2019 and March 2021
Basics of Programming (52153)
Weekly training sessions

WORK EXPERIENCE

- Web Developer, Arjan Araye Co., Ahwaz, Iran 2019-2022
Designed, implemented, and maintained a monthly salary reporting system serving thousands of active users on a daily basis using Django for backend and ReactJS for frontend

TEST SCORES

- **TOEFL iBT:** Reading: 30/30 Listening: 26/30 Speaking: 22/30 Writing: 24/30 **Total: 102/120**

SKILLS

- **Programming Languages:** Python, C++
- **Machine Learning Frameworks:** Tensorflow, Keras, PyTorch
- **Others:** git, Linux, Docker, L^AT_EX

LANGUAGES

- **Persian:** Native
- **English:** Professional Proficiency

REFERENCES

Available upon request