

## EDUCATION

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### 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

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• Artificial Intelligence	19.8/20
• Complex Dynamic Networks (M.Sc. Course)	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

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

## AWARDS AND HONORS

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- Ranked within the top 5% among B.Sc. Computer Engineering students
- Distinguished student in Computer Engineering Department

## RESEARCH EXPERIENCE

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- 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

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- [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

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- **Graph Neural Network Architecture Search**  
*Neural Architecture Search (NAS) for Graph Neural Networks in a novel way. To speed up the process, first search on a low-resolution view of the training graph, then iteratively improve the quality of the network on higher “zoomed-in” version of the same graph. The search is done using Optuna.*  
Code available at <https://github.com/rezanmz/GNN-NAS>
- **Graph Visualization**  
*Given a list of nodes and edges, it is possible to visualize the graph in a 2-dimensional plane in an unlimited number of ways. In this project, I tried to find the “best” representation (aesthetically pleasing) of the given graph using force-directed layout algorithm.*
- **Modeling Epidemics**  
*In this project I tried to analyze an epidemic with infection rate and recovery rate in an SIS (Susceptible - Infected - Susceptible) model. Graphing the number of infected and susceptible nodes of the population in different steps of the epidemic reveals the epidemic threshold of the epidemic and much more!*
- **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

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- **Teaching Assistant** at Sharif University of Technology, Kish International Campus March 2020  
*Numerical Methods (50072)*
- **Teaching Assistant** at Sharif University of Technology, Kish International Campus October 2019  
*Engineering Probability and Statistics (50063)*
- **Teaching Assistant** at Sharif University of Technology, Kish International Campus March 2019  
*Basics of Programming (52153)*

## TEST SCORES

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

## SKILLS

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- **Programming Languages:** Python, C++
- **Machine Learning Frameworks:** Tensorflow, Keras, PyTorch
- **Others:** git, Linux, Docker, L<sup>A</sup>T<sub>E</sub>X

## LANGUAGES

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

## REFERENCES

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- **Dr. H. Mahyar:** Assistant Professor - W Booth School of Engineering Practice and Technology at the *McMaster University, Hamilton, ON, Canada*, Email: [mahyarh@mcmaster.ca](mailto:mahyarh@mcmaster.ca)
- **Dr. S.A.A. G.Ghahramani:** Assistant Professor - Computer Engineering Dept. at the *Sharif University of Technology, Kish International Campus*, Email: [ghahramani@ce.sharif.edu](mailto:ghahramani@ce.sharif.edu)
- **Dr. M. Sani:** Assistant Professor - Mechanical Engineering Dept. at the *Sharif University of Technology, Kish International Campus*, Email: [msani@sharif.edu](mailto:msani@sharif.edu)