

# Mohammad Hashemi

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## Education

### Ph.D. in Computer Science

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATICS, EMORY UNIVERSITY

- **Cumulative GPA: 3.91/4**

Atlanta, Georgia, USA

Aug. 2023 - Present

### B.Sc. in Computer Engineering

FACULTY OF COMPUTER SCIENCE AND ENGINEERING, SHAHID BEHESHTI UNIVERSITY

- **Cumulative GPA: 3.85/4**

Tehran, Iran

Sep. 2018 - Feb. 2023

## Research Interests

Machine Learning | Saptio-temporal Computing | AI for Healthcare

## Publications

### Scalable Graph Condensation with Evolving Capabilities

ACM SIGKDD CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING

- S Gong\*, **M Hashemi\***, J Ni, C Yang, W Jin (\* Equal Contribution)
- Under review

KDD 2025

### A Comprehensive Survey on Graph Reduction: Sparsification, Coarsening, and Condensation [Slides]

INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE

- **M Hashemi**, S Gong, J Ni, W Fan, B. A Prakash, W Jin

IJCAI 2024

### Automated Cardiac Coverage Assessment in Cardiovascular Magnetic Resonance Imaging using a Recurrent 3D Dual-Domain Convolutional Network

MEDICAL PHYSICS

- S Nabavi, **M Hashemi**, M Ebrahimi Moghaddam, AA Abin, AF Frangi

Medical Physics

### Machine learning technique in the north zagros earthquake prediction

APPLIED COMPUTING AND GEOSCIENCES

- S Ommi, **M Hashemi**

Applied Computing & Geoscience

### A Type-2 Neuro-Fuzzy System with a Novel Learning Method for Parkinson's Disease Diagnosis

APPLIED INTELLIGENCE

- A Salimi-Badr, **M Hashemi**, H Saffari

APIN

### A Neural-Based Approach to Aid Early Parkinson's Disease Diagnosis

2020 11TH INTERNATIONAL CONFERENCE ON INFORMATION AND KNOWLEDGE TECHNOLOGY (IKT)

- A Salimi-Badr and **M Hashemi**

IKT 2020

## Honors & Awards

- 2023 **1st Place**, Best B.Sc. thesis project
- 2020 **6th Place**, out of 131 undergraduate students studying Computer Engineering
- 2017 **Passing the first stage**, of Mathematics Olympiad for two years
- 2016 **5th Place**, Khawarizmi Youth Nationwide Contest as a Robotic Researcher

Iran

Iran

Iran

Iran

# Experience

## RESEARCH EXPERIENCE

### Graduate Research Assistant

SAPATIAL COMPUTING LAB

Emory University

Mar. 2025 - Present

- Developing novel foundation models for understanding human mobility through geolocation data.
- Under supervision of [Prof. Andreas Zufle](#).

### Graduate Research Assistant

AIMS LAB

Emory University

Sep. 2024 - Apr. 2025

- Developing privacy-preserving predictive models for multi-modal temporal Electronic Health Record (EHR) data
- Rotation project under supervision of [Prof. Li Xiong](#).

### Graduate Research Assistant

MELODY LAB

Emory University

Aug. 2023 - Aug. 2024

- Proposing novel scalable and explainable **Graph Condensation** methods for Graph Neural Networks.
- Rotation project under supervision of [Dr. Wei Jin](#).

### B.Sc. Thesis

IMAGE PROCESSING & DISTRIBUTED SYSTEMS LAB

Shahid Beheshti University

Sep. 2022 - Feb. 2023

- Proposing novel **Deformable Image Registration(DIR)** using **GANs** for 4D CT lung images.
- Under supervision of [Prof. Mohsen Ebrahimi Moghaddam](#).

### Research Assistant

IMAGE PROCESSING & DISTRIBUTED SYSTEMS LAB

Shahid Beheshti University

Feb. 2021 - Mar 2022

- Proposing and Implementing a novel interpretable framework for Automatic Assessment of Full Left Ventricular Coverage in Cardiac Cine Magnetic Resonance Imaging with **3D CNNs equipped with explainable machine learning methods. The paper of this work is under review. [Link]**
- Under supervision of [Prof. Mohsen Ebrahimi Moghaddam](#) and his PhD student, [Shahabedin Nabavi](#)

### Research Assistant

ROIAA (ROBOTICS & INTELLIGENT AUTONOMOUS AGENTS) LAB

Shahid Beheshti University

Oct. 2020 - Jun. 2021

- Proposing various Recurrent Neural Networks (RNNs) such as LSTMs, and GRU for sequence learning to have early detection of Parkinson's Disease. This work was **submitted as a conference paper and published in IEEE [Link]**.
- In another research project, an interpretable classifier using an interval type-2 fuzzy neural network (IT2FCNN) for detecting patients suffering from Parkinson's Disease was proposed. This work also **resulted in a paper [Link]**.
- Under supervision of [Dr. Armin Salimi-Badr](#)

## WORK EXPERIENCES

### Machine Learning Mentor

RAHNEMA COLLEGE CO.

Tehran, Iran

Jan. 2022 - Mar 2022

- Assisting several interns in carrying out a project in the field of Reinforcement Learning (RL). The project aimed to propose **a recommender system based on batch Reinforcement Learning** algorithms.

### Machine Learning Intern

RAHNEMA COLLEGE CO.

Tehran, Iran

May. 2021 - Jul. 2021

- Developing a web application powered by the ability to perform **Web Crawler Detection** using unsupervised algorithms for the Sanjagh Co. website which is one of the biggest e-commerce platform in Iran. [\[Code\]](#)
- Under supervision of [Dr. Seyed Ali Osia](#), [Dr. Mahmood Karimian](#), [Yasin Orouskhani](#).

# Services

## CONFERENCE EXTERNAL REVIEWER

- 2024 **International Conference on Pattern Recognition, (ICPR)**
- 2024 **AAAI Conference on Artificial Intelligence, (AAAI)**
- 2024 **The International Conference on Learning Representations, (ICLR)**

## VOLUNTEERING

- 2024 **Web Chair @ WWW'24 Workshop - [Data-centric Artificial Intelligence](#), (DCAI)**