Mohammad **Hashemi**

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Education

Ph.D. in Computer Science — *Emory University*
Department of Computer Science and Informatics — *Aug. 2023 - Present*
- **Cumulative GPA: 3.95/4**

B.Sc. in Computer Engineering — *Shahid Beheshti University*
Faculty of Computer Science and Engineering — *Sep. 2018 - Feb. 2023*
- **Cumulative GPA: 3.85/4**

Research Interests

Machine Learning | **Spatio-temporal Computing** | **Graph Data Mining** | **Computer Vision**

Publications

Scalable Graph Condensation with Evolving Capabilities [pdf] — *KDD 2026*
The Thirty-second Conference on Knowledge Discovery and Data Mining
- S Gong*, **M Hashemi***, J Ni, C Yang, W Jin (* Equal Contribution)

From Points to Places: Towards Human Mobility-Driven Spatiotemporal Foundation Models via Understanding Places [pdf] — *SIGSPATIAL 2025*
The Thirty-third Conference on Advances in Geographic Information Systems
- **M Hashemi**, A Zufle

PlaceFM: A Training-free Geospatial Foundation Model of Places [pdf] — *arXiv 2025*
arXiv
- **M Hashemi**, H Amiri, A Zufle
- Under review

A Comprehensive Survey on Graph Reduction: Sparsification, Coarsening, and Condensation [pdf][slides][paper list] — *IJCAI 2024*
International Joint Conference on Artificial Intelligence
- **M Hashemi**, S Gong, J Ni, W Fan, B. A Prakash, W Jin

Automated Cardiac Coverage Assessment in Cardiovascular Magnetic Resonance Imaging using a Recurrent 3D Dual-Domain Convolutional Network [pdf][code] — *Medical Physics*
Medical Physics
- S Nabavi, **M Hashemi**, M Ebrahimi Moghaddam, AA Abin, AF Frangi

Machine learning technique in the north zagros earthquake prediction [pdf] — *Applied Computing & Geoscience*
Applied Computing and Geosciences
- S Ommi, **M Hashemi**

A Type-2 Neuro-Fuzzy System with a Novel Learning Method for Parkinson's Disease Diagnosis [pdf] — *APIN*
Applied Intelligence
- A Salimi-Badr, **M Hashemi**, H Saffari

A Neural-Based Approach to Aid Early Parkinson's Disease Diagnosis [pdf][code] — *IKT 2020*
2020 11th International Conference on Information and Knowledge Technology (IKT)
- A Salimi-Badr, **M Hashemi**

Honors & Awards

2025	**M.Sc. in Computer Science at Emory University**, [certification]	*USA*
2023	**1st Place**, Best B.Sc. thesis project	*Iran*
2020	**4th Place**, out of 131 undergraduate students studying Computer Engineering	*Iran*
2017	**Passing the first stage**, of Mathematics Olympiad for two years	*Iran*

Experience

Research Experience

Graduate Research Assistant — *Emory University*
Sapatial Computing Lab — *Mar. 2025 - Present*
- Developing novel foundation models for understanding human mobility through geolocation data.
- Under supervision of **Prof. Andreas Zufle**.

Graduate Research Assistant — *Emory University*
AIMS Lab — *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 — *Emory University*
Melody Lab — *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 — *Shahid Beheshti University*
Image Processing & Distributed Systems Lab — *Sep. 2022 - Feb. 2023*
- Proposing a novel **Deformable Image Registration(DIR)** for 4D CT lung images. **[code]**
- Under supervision of **Prof. Mohsen Ebrahimi Moghaddam**.

Research Assistant — *Shahid Beheshti University*
Image Processing & Distributed Systems Lab — *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.
- Under supervision of **Prof. Mohsen Ebrahimi Moghaddam**.

Research Assistant — *Shahid Beheshti University*
RoIAA (Robotics & Intelligent Autonomous Agents) Lab — *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.
- 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.
- Under supervision of **Dr. Armin Salimi-Badr**

Work Experiences

Machine Learning Mentor — *Tehran, Iran*
Rahnema College Co. — *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 — *Tehran, Iran*
Rahnema College Co. — *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**, and **Yasin Orouskhani**.

Services

Conference External Reviewer

2025 **The Conference on Advances in Geographic Information Systems**, (SIGSPATIAL)
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 in Data-centric Artificial Intelligence [website]**, DCAI