Ashkan Ganj

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RESEARCH INTERESTS

My research is primarily centered on the field of **Computer Vision**, with a profound emphasis on **3D vision** and its pivotal role in enhancing **Augmented Reality (AR)** systems. My interest is driven by the belief that 3D vision technology is fundamental to unlocking the full potential of AR, providing more immersive and interactive experiences that seamlessly blend the digital with the physical. The core of my work involves not only advancing 3D vision techniques but also exploring their innovative applications in AR environments. This includes the development of more sophisticated AR systems that can understand and interact with the 3D structure of the real world in **real-time**. Additionally, I am committed to the study and application of Optimization and System Design principles, as these are essential for improving AR **system performance and user accessibility**. Through my research, I aim to contribute to the evolution of AR and 3D vision applications, making them more intuitive, effective, and accessible for users worldwide.

EDUCATION

Worcester Polytechnic Institute — Worcester, MA, USA
Ph.D in Computer Science — 2023–current

- Advisor: Tian Guo
- Cumulative **GPA: 4/4**

University of Mohaghegh Ardabili — Ardabil, Ardabil, Iran
Bachelor Of Engineering in Computer Engineering — 2018–2022

- Cumulative **GPA: 3.8/4** (18.25/20)
- **Ranked 2**[th] cumulative GPA within the **top 5% of graduating** class

PUBLICATIONS

1. Mobile Depth Estimation: Challenges and Prospects
   The 25th International Workshop on Mobile Computing Systems and Applications(HotMobile24) — Feb 2024
   A. Ganj, Y. Zhao, H. Su, T. Guo

2. Toward Scalable and Controllable AR Experimentation
   1st ACM Workshop on Mobile Immersive Computing, Networking, and Systems(ImmerCom'23) — Oct 2023
   A. Ganj, Y. Zhao, F. Galbiati, T. Guo

3. LR-Net: A Block-based Convolutional Neural Network for Low-Resolution Image Classification
   Iranian Journal of Science and Technology, Transactions of Electrical Engineering — June 2023
   A. Ganj, M. Darvish, M. EbadPour, H. Bahador

HONORS & AWARDS

- Awarded **Travel Grant**, ACM HotMobile 2024 Workshop. — 2024
- "Toward Scalable and Controllable AR Experimentation", received **best paper runner-up award** at ImmerCom'23 — 2023
- Awarded **Travel Grant**, ACM SIGCOMM 2023 conference. — 2023
- Awarded **distinguished student** in the department of electrical and computer engineering — 2019–2022

Skills

- **Programming Languages:**

  Python, C++, TypeScript, JavaScript
- **Machine learning and Deep learning:**

  PyTorch, Tensorflow, Scikit-learn, Matplotlib, Pandas, Numpy, Jupyter-Notebook
- **Databases:** PostgreSQL, MySQL
- **Operating System:** Microsoft Windows, Debian GNU/Linux
- **Front-end:** Vue Js, Angular, Html, CSS
- **Back-end:** Django, Flask

Languages

- **Persian:** Native
- **Turkish-Azari:** Native
- **English:** Fluent

Teaching Experience

Worcester Polytechnic Institute (WPI), Computer Science Department   2023 - Current

- Teaching Assistant, CS 2303 (Systems Programming Concepts)   C-term, Spring 2023
- Teaching Assistant, CS 2119 (Application Building with Object-Oriented Concepts)   D-term, Spring 2023
- Teaching Assistant, CS 1101 (Introduction to Program Design)   A-term, Fall 2023
- Teaching Assistant, CS 4233 (Object-Oriented Analysis and Design)   B-term, Fall 2023

UMA University, Electrical and Computer Engineering Department   2021 - 2022

- Lab Assistant, Digital System Lab   Fall 2022
- Teaching Assistant, Software Engineering   Fall 2021
- Teaching Assistant, Discrete Mathematics   Spring 2021 and 2022

Technical Experience

Access Endless Communication(AEC)   [website] - Tehran

Front-end Developer- Internship   August 2020 - March 2021