

## Summary

Full-time Lecturer Faculty in Computer Science at UMass Boston with a Ph.D. in Computer Science (Michigan Technological University, 2023). Broad teaching experience across core CS curricula including Programming in C, Data Structures, Discrete Mathematics, and Theory of Computation. Research expertise in Virtual Reality, Human-Computer Interaction, and perceptually-aware systems, with publications at ACM SAP and related venues. Experience supervising student research, reviewing for IEEE VR and VRST, and contributing to program committees. Strong record of collaboration with industry (Visteon Corp.) on applied AI and ML and interactive system integration. U.S. Permanent Resident (Green Card).

## Research Interests

- Virtual Reality and Human-Computer Interaction
- Distance Perception and Foveated Rendering
- AI and ML for Interactive and Perceptual Systems
- Computer Graphics and Visualization
- Robotics and Intelligent Systems

## Technical Skills

- **Languages:** C, C++, Python, C#, Racket, Coq, Java
- **Frameworks:** Unity, OpenGL and GLSL, CUDA, TensorFlow
- **Tools:** Git, Docker, CMake, gcc and clang, Tkinter
- **OS:** Linux, Windows, Unix

## Academic Experience

### Faculty Lecturer in Computer Science

University of Massachusetts Boston *2024 to Present*

- Teach large enrollment courses across multiple sections including:
  - CS110: Introduction to Computing
  - CS 210: Intermediate Computing with Data Structures
  - CS220: Applied Discrete Mathematics
  - CS240: Programming in C
  - CS420: Theory of Computation
  - CS410: Software Engineering
  - CS450: Structure of Higher Level Programming Languages
- Designed syllabi, programming projects, and exams; integrated autograding and analytics for scale and fairness.
- Supervised undergraduate research projects in VR and computational systems; mentored students toward conference submissions.

### Ph.D. Researcher

Michigan Technological University *2019 to 2023*

- Dissertation: *Distance Perception in Virtual Reality* [link].
- Designed controlled HCI studies on blind walking and camera passthrough; implemented Unity and OpenGL tooling for real time measurement.
- Built eye tracking enabled VR tasks for distance

judgment at 90 FPS with safe participant protocols and automated data pipelines.

## Industry Experience

**Product Design Technical Lead Intern** Visteon Corporation, Michigan *Summer 2022*

- Built V-PEDAT, a Python and Tkinter analytics tool that ingested 550 plus CSV files and generated 26,500 plots in under five minutes, which cut manual analysis time by about 99 percent.
- Coordinated weekly scrums with cross functional electrical and software teams; tracked validation items for global bench deployments.
- Authored test procedures and acceptance criteria for electronic cockpit benches and created reproducible troubleshooting guides.

**AI and System Integration Intern** Visteon Corporation, Michigan *Summer 2021*

- Reworked a hand on wheel detection pipeline using first principles geometry and signal fusion; achieved sub 30 ms inference on an embedded ECU.
- Implemented end to end flashing and verification with QFILL and USB harnesses; delivered stable images with flash once and run clean targets.
- Benchmarked CPU and memory use for algorithm variants; documented tradeoffs for production readiness.

**ADAS Research Intern** Visteon Corporation, Michigan *Summer 2020*

- Automated conversion of 60,000 plus LiDAR frames from NPZ to PNG and containerized PackNet with CUDA and TensorFlow, which reduced new hire setup from over four hours to under thirty minutes.
- Created reproducible Docker workflows and data checksums; sped up onboarding and experiment repeatability for the ADAS team.
- Assisted with dataset curation and augmentation for depth and segmentation tasks; wrote scripts for batch evaluation.

## Education

**Ph.D. Computer Science**, Michigan Technological University  
2019 to 2023, GPA 3.71

**M.S. Computer Science**, Michigan Technological University  
2019 to 2022, GPA 3.71

**B.S. Computer Software Engineering**, Azad University, Tehran  
2014 to 2018, GPA 3.74

## Publications

1. Sepahyar, S. et al., VR Distance Judgements, ACM SAP 2022 [link]
2. Sepahyar, S. et al., Brightness vs. Distance Judgements,

ACM SAP 2020 [link]

3. Sepahyar, S. et al., Sorting Algorithm Comparison, ACM ACAI 2019 [link]

## Awards

Finishing Fellowship Grant, Michigan Tech, 2023

Business Opportunity Recognition Certificate, VRSPACE, 2023

## Service

Reviewer: IEEE VR 2023 to 2025, VRST 2023 to 2025

Program Committee: ACM SAP 2025