Mansi Maheshwari

(206) 607-7614 | mmaheshwari@umass.edu | LinkedIn | Website

Education

University of Massachusetts Amherst — Amherst, MA
Master's of Science in Computer Science ***GPA 4.0*** — *Aug. 2024 – May 2026*

- **Relevant Coursework:** Neural Networks, Reinforcement Learning, Robotics, Algorithms for Data Science, Research Methods, Research Writing
- **Master's Thesis**: Lifelong Reinforcement Learning in Embodied Settings; Supervisors: Bruno Castro da Silva, Hao Zhang

University of Washington — Seattle, WA
Bachelor's of Science in Electrical Engineering — *Aug. 2018 – June 2022*

- **Relevant Coursework:** Fundamentals of Optimization and Machine Learning, Signal Processing, Multivariate Calculus, Statistical Methods for Science, Embedded Systems

Publications

M. Maheshwari, B. da Silva, and J. Raisbeck *AltNet: Alternating Network Resets for Plasticity.* **In Proceedings** of the Conference on Lifelong Learning Agents (CoLLAs), 2025.

M. Maheshwari, J. Raisbeck, and B. da Silva *AltNet: Addressing the Plasticity-Stability Dilemma in Reinforcement Learning.* **In Submission** at the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2026.

Awards and Scholarships

Groundbreaking Graduate Researcher Award Nominee — October 2025
Nominated by Professor Bruno Castro da Silva; results expected in 2026

Finalist, Three Minute Thesis Competition — March 2025
Recognized as one of the top 10 students in a university-wide competition for translating complex scientific research into accessible ideas to a broad audience

Lawrence & Lucille Frey Endowed Electrical Engineering Scholarship — 2020 – 2021
Merit-based scholarship given to a select few students at the University of Washington

Relevant Experience

Research Assistant (Reinforcement Learning and Robotics) — July 2024 – Present
Autonomous Learning Lab, University of Massachusetts — *Amherst, MA*

- Developed a novel deep reinforcement learning architecture that improves continual learning, enhances sample efficiency, and increases safety in non-stationary environments.
- Evaluated agents on robotics control tasks and game environments (DeepMind Control Suite, MuJoCo).
- Adapting the proposed architecture for deployment on real robotic platforms.
- Published this research in workshop at the Conference on Lifelong Learning Agents (CoLLAs) 2025; Full version in submission at the Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2026.

Artificial Intelligence Research and Development Intern — May 2025 – Aug 2025
CNH Industrial, Perception Team - Autonomous Vehicles — *Scottsdale, AZ*

- Led the design and development of an efficient, scalable vision architecture unifying object detection and segmentation through a transformer based YOLO multihead model for autonomous vehicles.
- Improved computational efficiency by ∼43%, meeting strict latency requirements.
- Developed and documented a multi-task architecture that would allow new vision tasks to be added with minimal compute overhead, establishing a scalable foundation for future vision capabilities.
- Investigated multi-modal perception strategies by fusing image and sensor data, future-proofing the architecture for richer sensing modalities.

Software Engineer July 2022 – July 2024

Nordstrom *Seattle, WA*

- Optimized workflow by automating multiple engineering tasks (Java) in distributed systems.
- Achieved 80% test coverage for large-scale data integrity through JUnit Integration Tests for multiple projects.
- Led end-to-end development (requirements gathering, design discussions, code reviews, testing, and deployment) of a feature to stop awarding points for alcohol purchase.

Teaching Experience

Instructor, Fundametals of Artificial Intelligence May 2025 – Jul 2025

University of Washington *Remote*

- Instructed a 10-day, 30-hour course introducing high school students to core AI concepts including machine learning, deep learning, computer vision, large language models, and ethical AI; guided students in completing final projects synthesizing learned skills.
- Co-developed the curriculum and designed accessible, visually engaging slide decks and coding exercises to support conceptual understanding.
- Fostered an inclusive and interactive classroom environment through live polls (Poll Everywhere), quizzes (Kahoot), reflection activities, and curated videos showcasing real-world AI applications to enhance engagement and conceptual understanding.

Subject Matter Expert, Artificial Intelligence Sept 2025 – Present

iCEV Multimedia *Remote*

- Provided subject-matter expertise for the Introduction to Artificial Intelligence textbook, ensuring conceptual accuracy, effective pedagogy, and alignment with educational standards.
- Reviewed lesson plans, identify gaps in learning progression, and deliver feedback to enhance student comprehension and engagement.
- Collaborated with curriculum designers to improve instructional materials and integrate real-world AI examples for accessibility and impact.

PROJECTS

Human Following Robot, Autonomous Cinematography Feb 2025 – May 2025

- Designed and implemented a mobile robot pipeline integrating perception (YOLOv7 for human detection and tracking), path planning (DWA-based trajectory generation), and real-time control (PID-based actuation) to autonomously follow and film a moving subject.

Multi-Modal Conversational Recommender System Aug 2024 – Dec 2024

- Built a multi-modal recommendation pipeline (tabular, visual, text) using CLIP encoders and BERT-based retrieval, with LLM explainability (GPT-4) to generate transparent rationales and enhance user trust.