

# Aadarsha Gopala Reddy

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## EDUCATION

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**M.S. Computer Science** | Washington University in St. Louis, St. Louis, Missouri, USA Fall 2024 - \*Spring 2026

- **GPA:** 3.52/4.0
- **Coursework:** Advances in Computer Vision, Data Manipulation & Management at Scale, Artificial Intelligence for Health, Neurobiology of Learning & Memory, Advanced Neuroscience Research Methods, Computational Biology, Deep Learning, Systems Security, Software Development, and Introduction to Quantum Computing.

**B.A. Computer Science & Data Analytics** | Ohio Wesleyan University, Delaware, Ohio, USA Fall 2020 - Spring 2023

- **Minor:** Economics
- **GPA:** 3.42/4.0
- **Coursework:** Computer Architecture, Theory of Computation, Algorithms, Big Data, Data Visualization, Data Analytics, Databases, Machine Learning, Artificial Intelligence, Applied Statistics.

## RESEARCH EXPERIENCE

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**Domain-Adversarial Learning for a Vehicle-Agnostic Driving Signature to Detect ‘Preclinical Alzheimer’s Disease** | DRIVES Project, Washington University in St. Louis, St. Louis, Missouri, USA

*Master’s Thesis* \*Spring 2026

- Implementing a Domain Adversarial Neural Network (DANN) to improve cross-domain generalization of driving behavior based machine learning models for Alzheimer’s Disease diagnosis.

**Multimodal Prediction of Alzheimer’s Disease** | Washington University in St. Louis, St. Louis, Missouri, USA

*CSE 419A - Introduction to AI for Health* Fall 2024

- Developed a multimodal approach for early detection of Alzheimer’s Disease using the OASIS-1 dataset.
- Implemented deep learning models (CNNs) using TensorFlow/Keras for MRI image analysis and machine learning techniques (XGBoost, Scikit-learn) for clinical data processing.
- Created a combined classifier leveraging both imaging and clinical data.
- Documented the project in NeurIPS format with comprehensive performance evaluation metrics and visualizations.

**Opinion Survey on Artificial Intelligence in the Workplace** | Ohio Wesleyan University, Delaware, Ohio, USA

*DATA 490 - Independent Study* Spring 2023

- Designed, fielded, and investigated a survey experiment on the impact of AI on 250 employees within each of four industries using survey data under Dr. Nicholas Dietrich’s mentorship.
- Analyzed data using Tableau dashboards and R to identify trends and common opinions.
- Presented preliminary results on AI’s positive impact on employee work at the OWU Spring Student Symposium.

**Connect 4 AI** | Ohio Wesleyan University, Delaware, Ohio, USA

*CS 340 - Artificial Intelligence* Fall 2022

- Developed a Connect 4 game in Java with a single-player mode against an AI opponent and a multiplayer mode for two human players.
- Used the alpha-beta pruning algorithm to create a challenging AI opponent that can test players of all skill levels.

**Artificial Intelligence in Modern Board Games - Lost Cities AI** | Ohio Wesleyan University, Delaware, Ohio, USA

*Summer Science Research Program* Summer 2022

- Developed a digital version of the Lost Cities card game using Java in 2 weeks under Dr. Sean McCulloch’s mentorship.
- Implemented an intelligent agent that played the game against a human, winning 13 of 18 games in testing.

## TEACHING EXPERIENCE

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**Computer Science Lab Assistant** | Ohio Wesleyan University, Delaware, Ohio, USA Spring 2022 - Spring 2023

- Tutored approximately ten students for over 6 hours per week, assisting with homework and exam preparation for introductory, intermediate, and advanced computer science coursework.
- Tested and graded assignments of around 35 students in introductory and intermediate computer science classes.

INDUSTRY EXPERIENCE

<b>AI Engineer Intern</b>   Crittero, Inc., Remote	Summer 2025
<ul style="list-style-type: none"><li>Engineered a full-stack social media simulation and recommendation system, developing a robust data generation pipeline with persona-based modeling in TypeScript and a foundational recommendation algorithm using TensorFlow/Keras.</li><li>Created an extensive testing infrastructure in Python, featuring a configurable CLI for performance validation and reproducibility, which established critical debugging practices for complex ML systems.</li><li>Gained hands-on experience in the end-to-end ML lifecycle, from synthetic data generation and preprocessing to model training and debugging, while establishing Git workflows for collaborative development.</li></ul>	
<b>Graduate Assistant with the Taylor Family Center for Student Success</b>   Washington University in St. Louis, St. Louis, Missouri, USA	Fall 2024 - Spring 2025
<ul style="list-style-type: none"><li>Led strategic initiatives for First-Generation, Limited-Income (FLI) student success, planning and executing key community-building programs like “End of Week Unwind.”</li><li>Drove marketing efforts by managing social media and newsletters, and pioneered data assessment to translate user interaction insights into strategies that measurably improved engagement.</li><li>Served as a department representative for the Executive Director and provided integral operational support to the leadership team.</li></ul>	
<b>Data Analyst Intern</b>   Lab714, Boca Raton, Florida, USA	Summer 2023 - Summer 2024
<ul style="list-style-type: none"><li>Achieved a 20% reduction in costs for clients through data-driven insights.</li><li>Engineered a software using React and AWS to extract, organize, and analyze data from IoT devices.</li></ul>	
<b>Media Center Assistant</b>   Ohio Wesleyan University, Delaware, Ohio, USA	Fall 2021 - Spring 2023
<ul style="list-style-type: none"><li>Set up and tore down audio-visual equipment, logged equipment movement using Sierra, and created appointments for use of spaces.</li><li>Assisted with providing AV systems and support for events, ensuring successful setup and execution.</li></ul>	

SKILLS

<b>Programming Languages:</b>	Java, C++, Python, R, JavaScript/TypeScript, PHP, C#, SQL, Rust.
<b>Frameworks &amp; Libraries:</b>	TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, Node.js, Vue.js, React, Socket.IO, Gemini/OpenAI API.
<b>Tools &amp; Technologies:</b>	Git, Tableau, Power BI, MySQL, AWS, MongoDB, MySQL, Microsoft 365, Google Workspace.
<b>Core Competencies:</b>	Analytical Skills, Problem Solving, Critical Thinking, Communication, Team Collaboration, Leadership, Adaptability, Project Management.
<b>Languages:</b>	Proficient in English, Kannada, Telugu; Fundamental in Hindi.

HONORS

<b>Dean’s List</b> , Ohio Wesleyan University	Spring 2022 & Spring 2023
<b>Mortar Board National College Senior Honor Society Membership</b> , Ohio Wesleyan University	Spring 2023
<b>Golden Bishop Award</b> , Ohio Wesleyan University	Spring 2023
<b>Florence Leas Sophomore Prize</b> , Ohio Wesleyan University	Spring 2022
<b>First Place - 32nd Annual Spring Programming Contest</b> , Denison University	Spring 2022
<b>International Baccalaureate Scholarship</b> , Ohio Wesleyan University	2020
<b>Scholar</b> , Next Genius Scholarship Foundation	2020

PRESENTATIONS

<b>Artificial Intelligence Opinion Survey</b> <i>Spring Student Symposium</i> , Ohio Wesleyan University	Spring 2023
<b>Artificial Intelligence in Modern Board Games</b> <i>Patricia Belt Conrades Summer Science Research Symposium</i> , Ohio Wesleyan University	Fall 2022

LEADERSHIP EXPERIENCE

<b>Graduate and Professional Student Council (GPSC)</b>   Washington University in St. Louis, St. Louis, Missouri, USA	
<i>Vice President of the Graduate-Professional Council (GPC) Chamber</i>	Summer 2025 - Present
<ul style="list-style-type: none"><li>Actively support the GPC Co-President in fulfilling leadership responsibilities and advancing council goals for the Master’s and Professional student body. As per the constitution, prepared to assume the duties and powers of the Co-President in their absence to ensure leadership continuity.</li><li>Represent and advocate for GPC constituents’ interests to university administration and faculty.</li></ul>	
<i>Constitution Committee Chair</i>	
<ul style="list-style-type: none"><li>Leading the committee to draft and finalize the constitution, ensuring alignment with GPSC’s mission and values.</li></ul>	

*McKelvey School of Engineering Representative, and member of the Membership, Constitution, & Outreach Committee* Fall 2024 - Spring 2025

- Co-authored the GPSC's constitution and spearheaded outreach initiatives that expanded membership.
- Advocated for the interests and concerns of McKelvey School of Engineering students.

**Umang (Indian Graduate Student Association)** | Washington University in St. Louis, St. Louis, Missouri, USA

*Treasurer* Summer 2025 - Present

- Managing club finances, including budgeting, expense tracking, and fundraising to ensure sustainable operations and successful event planning.
- Collaborating with members to organize cultural events and festivals, promoting cultural awareness and fostering community among Indian graduate students.

**Association of Graduate Engineering Students (AGES)** | Washington University in St. Louis, St. Louis, Missouri, USA

*Member* Fall 2024 - Present

- Organizing events and initiatives to foster community among graduate engineering students, enhancing networking and professional development opportunities.

**HackWashU** | Washington University in St. Louis, St. Louis, Missouri, USA

*Treasurer* Fall 2024 - Summer 2025

- Managing the club's finances, including budgeting and expense tracking, to ensure sustainable operations and successful event planning.
- Coordinating fundraising efforts and sponsorship outreach to support club activities and initiatives.
- Collaborating with club members to organize hackathons and coding events, fostering a culture of innovation and teamwork among participants.

**Hindu Student Council** | Ohio Wesleyan University, Delaware, Ohio, USA

*Treasurer and Founding Member* Spring 2023

- Submitted formal budget requests and organized events to raise awareness of Hindu cultural heritage and provide youth leadership development and volunteer opportunities.

**Wesleyan Council on Student Affairs (Student Government)** | Ohio Wesleyan University, Delaware, Ohio, USA

*Budget Committee Senator* Fall 2022 - Spring 2023

- Proposed, discussed, and decided bills for the senate and oversaw budget allocation of over \$350,000 each year to individuals, clubs, and organizations on campus.
- Awarded WCSA Best New Member Golden Bishop Award for making outstanding contributions to the council's missions, goals, and agenda.

**The Neurds (Neuroscience Club)** | Ohio Wesleyan University, Delaware, Ohio, USA

*Member* Fall 2022 - Spring 2023

- Presented on AI at Brain Fair 2023 during Brain Awareness Week, bridging neuroscience and technology.
- Aided event planning and marketing for the club's educational and networking goals.
- Promoted neuroscience awareness and community service for intellectual and career development.

**Campus Programming Board** | Ohio Wesleyan University, Delaware, Ohio, USA

*Vice President of Finance* Spring 2022 - Fall 2022

- Successfully planned, created, and implemented budgets totaling over \$86,000 each year for campus events.
- Initiated and led revamp of organization's governing documents, implementing efficient practices.
- Negotiated an additional \$10,000 per year with the Wesleyan Council on Student Affairs.

*Marketing Committee Member* Fall 2020 - Spring 2023

- Spearheaded social media campaigns and designed promotional materials to enhance student engagement and event visibility.
- Organized marketing initiatives, including posters, tabling events, and giveaways, to maximize student participation and attendance at events.

**Mathematics, Computer Science & Data Analytics Student Board** | Ohio Wesleyan University, Delaware, Ohio, USA

*Member* Fall 2021 - Spring 2023

- Analyzed faculty evaluations to provide actionable insights for departmental improvements.
- Gathered and synthesized student feedback on course offerings to recommend enhancements to the department.

**Horizons International** | Ohio Wesleyan University, Delaware, Ohio, USA

*Marketing Committee Chair* Fall 2021 - Fall 2022

- Led social media campaigns, designed materials to boost international student event awareness and engagement.
- Organized marketing for cultural exchange, creating a welcoming environment for international students and fostering cross-cultural understanding within the university community.

## PROJECTS

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**Datacenter Cooling Optimization using Deep Reinforcement Learning** | Fall 2024

Washington University in St. Louis, St. Louis, Missouri, USA

- Implemented multiple deep reinforcement learning algorithms (DDQN, PPO, SAC) integrated with EnergyPlus simulations to optimize datacenter cooling systems.
- Achieved 35.8% energy efficiency improvement over baseline using DDQN, addressing the underserved small to mid-sized datacenter market.
- Created a comprehensive framework integrating building energy simulation with reinforcement learning for dynamic thermal management.

**Interactive Storybook** | Washington University in St. Louis, St. Louis, Missouri, USA Fall 2024

- Developed an interactive storytelling application using Vue.js, Node.js, and MongoDB with AI-powered content generation, enabling users to create branching narrative stories.
- Implemented OpenAI API integration for dynamic story text and contextual image generation based on user choices.
- Created a visual path tracking interface to help users navigate complex branching narratives and story progression.

**Socket.IO Multi-Room Chat Application** | Fall 2024

Washington University in St. Louis, St. Louis, Missouri, USA

- Developed a feature-rich multi-room chat application using Node.js and Socket.IO with password-protected rooms, private messaging, and user moderation capabilities.
- Implemented room management features including creator privileges, user tracking, and persistent nickname storage.
- Created real-time bidirectional event-based communication with responsive design for optimal user experience.

**PHP Calendar Application** | Washington University in St. Louis, St. Louis, Missouri, USA Fall 2024

- Developed a feature-rich personal calendar and event management web application using PHP, MySQL, HTML5, CSS3, and JavaScript.
- Implemented secure user authentication, CSRF protection, SQL injection prevention, and input sanitization.
- Created an interactive calendar interface with comprehensive event management capabilities for creation, editing, and tracking.

**Parkinson's Disease AI Diagnosis Software** | Summer 2022

MITxSureStart FutureMakers Create-a-Thon Program, Remote

- Developed AIParkinScan software for Parkinson's diagnosis using neural networks, spectrograms, and the Random Forest algorithm trained on audio and image data.