

Aadarsha Gopala Reddy

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EDUCATION

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

- **GPA:** 3.52/4.0
- **Coursework:** 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 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

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

Fall 2025 - *Spring 2026

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

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

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

AI Engineer Intern | Crittero, Inc., Remote

Summer 2025

- 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.
- 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.
- 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.

Graduate Assistant with the Taylor Family Center for Student Success |
Washington University in St. Louis, St. Louis, Missouri, USA

Fall 2024 - Spring 2025

- Led strategic initiatives for First-Generation, Limited-Income (FLI) student success, planning and executing key community-building programs like “End of Week Unwind.”
- Drove marketing efforts by managing social media and newsletters, and pioneered data assessment to translate user interaction insights into strategies that measurably improved engagement.
- Served as a department representative for the Executive Director and provided integral operational support to the leadership team.

Data Analyst Intern | Lab714, Boca Raton, Florida, USA

Summer 2023 - Summer 2024

- Achieved a 20% reduction in costs for clients through data-driven insights.
- Engineered a software using React and AWS to extract, organize, and analyze data from IoT devices.

Media Center Assistant | Ohio Wesleyan University, Delaware, Ohio, USA

Fall 2021 - Spring 2023

- Set up and tore down audio-visual equipment, logged equipment movement using Sierra, and created appointments for use of spaces.
- Assisted with providing AV systems and support for events, ensuring successful setup and execution.

SKILLS

Programming Languages: Java, C++, Python, R, JavaScript/TypeScript, PHP, C#, SQL, Rust.

Frameworks & Libraries: TensorFlow, PyTorch, Scikit-learn, Keras, NumPy, Pandas, Matplotlib, Seaborn, Node.js, Vue.js, React, Socket.IO, Gemini/OpenAI API.

Tools & Technologies: L^AT_EX, Git, Tableau, Power BI, MySQL, AWS, MongoDB, MySQL, Microsoft 365, Google Workspace.

Core Competencies: Analytical Skills, Problem Solving, Critical Thinking, Communication, Team Collaboration, Leadership, Adaptability, Project Management.

Languages: Proficient in English, Kannada, Telugu; Fundamental in Hindi.

HONORS

Dean’s List, Ohio Wesleyan University

Spring 2022 & Spring 2023

Mortar Board National College Senior Honor Society Membership, Ohio Wesleyan University

Spring 2023

Golden Bishop Award, Ohio Wesleyan University

Spring 2023

Florence Leas Sophomore Prize, Ohio Wesleyan University

Spring 2022

First Place - 32nd Annual Spring Programming Contest, Denison University

Spring 2022

International Baccalaureate Scholarship, Ohio Wesleyan University

2020

Scholar, Next Genius Scholarship Foundation

2020

PRESENTATIONS

Artificial Intelligence

Fall 2024

Engineering Workshop by AGES & Science Coach, Washington University in St. Louis

Artificial Intelligence Opinion Survey

Spring 2023

Spring Student Symposium, Ohio Wesleyan University

Artificial Intelligence in Modern Board Games

Fall 2022

Patricia Belt Conrades Summer Science Research Symposium, Ohio Wesleyan University

LEADERSHIP EXPERIENCE

Graduate and Professional Student Council (GPSC) | Washington University in St. Louis, St. Louis, Missouri, USA

Vice President of the Graduate-Professional Council (GPC) Chamber

Summer 2025 - Present

- Actively supporting the GPC Co-Presidents in fulfilling leadership responsibilities and advancing council goals for the Master's and Professional student body.
- Representing and advocating for GPC constituents' interests to university administration and faculty.
- Spearheading the creation and management of the Council's communication channels and documentation.

Constitution Committee Chair

- Leading the committee to draft and ratify the constitution, ensuring alignment with GPSC's mission and values.

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 - Fall 2025

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

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

- Co-established the council and organized events promoting Hindu cultural heritage, fostering youth leadership skills, and creating volunteer opportunities.
- Managed organizational finances, developing and submitting formal budget requests to secure funding for council activities and events.

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

Budget Committee Senator

Fall 2022 - Spring 2023

- Actively contributed to the Budget Committee's process of proposing, discussing, and deciding on senate bills, while overseeing the allocation of an annual budget exceeding \$350,000 to campus individuals and organizations.
- Recipient of the WCSA Best New Member Golden Bishop Award, recognized for making the greatest overall contribution to WCSA's mission through drive, high achievement on the Budget Committee, and providing unique, valuable perspectives.

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.
- Contributed to the planning and marketing of club events, directly supporting educational enrichment and networking opportunities for members.
- Participated in initiatives promoting neuroscience awareness and community service, aiming to enhance members' intellectual and career development pathways.

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.

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

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.