Aadarsha Gopala Reddy

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EDUCATION

M.Sc. Computer Science | Washington University in St. Louis, St. Louis, Missouri, USA   Fall 2024 - *Spring 2026
- **GPA:** 3.2/4.0
- **Coursework:** Artificial Intelligence for Health, Computational Biology, Deep Learning, and Software Development.

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

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

Graduate Assistant with the Taylor Family Center for Student Success | Fall 2024 - *Spring 2025
Washington University in St. Louis, St. Louis, Missouri, USA
- Leading initiatives to enhance first gen/limited income student success, including program planning, data analysis, and communication.
- Coordinating key events, tracking student data, and contributing to assessment efforts for the department.
- Supporting alumni engagement through newsletter development, database management, and other logistics.

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, NumPy, Pandas, Node.js, Vue.js, React, Socket.IO, Gemini/OpenAI API.
Tools & Technologies: 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 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
Membership, Constitution, & Outreach Committee Member; McKelvey Engineering   Fall 2024 - Present
Representative to the Graduate Professional Council (GPC) Chamber
- Collaborating with fellow committee members to review and revise the council's constitution, ensuring alignment with university policies and enhancing member engagement strategies.
- Participating in discussions to improve master's student representation and address concerns within the university community.

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 - Present
- 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
- Created social media campaigns and print materials to engage students and promote events.
- Coordinated marketing efforts including posters, tabling, giveaways, and contests to boost attendance at events.

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 including creation, editing, categorization, 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.