

# Aadarsha Gopala Reddy

a.gopalareddy@wustl.edu | +1 (740) 802-1776

agopalareddy.github.io



## 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** | 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

**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** | Washington University in St. Louis, St. Louis, Missouri, USA Fall 2024 - \*Spring 2025

- 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.

<b>Data Analyst Intern</b>   Lab714, Boca Raton, Florida, USA	Summer 2023 - Summer 2024
<ul style="list-style-type: none"> <li>Developed software using React and AWS that works with IoT devices to extract, organize, and analyze data.</li> <li>Generated meaningful client-facing results from the data, which created nearly 20% cost savings.</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

**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

<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>Membership, Constitution, &amp; Outreach Committee Member; McKelvey Engineering Representative to the Graduate Professional Council (GPC) Chamber</i>	Fall 2024 - Present
<ul style="list-style-type: none"> <li>Collaborating with fellow committee members to review and revise the council’s constitution, ensuring alignment with university policies and enhancing member engagement strategies.</li> <li>Participating in discussions to improve master’s student representation and address concerns within the university community.</li> </ul>	
<b>Association of Graduate Engineering Students (AGES)</b>   Washington University in St. Louis, St. Louis, Missouri, USA <i>Member</i>	Fall 2024 - Present
<ul style="list-style-type: none"> <li>Organizing events and initiatives to foster community among graduate engineering students, enhancing networking and professional development opportunities.</li> </ul>	
<b>HackWashU</b>   Washington University in St. Louis, St. Louis, Missouri, USA <i>Treasurer</i>	Fall 2024 - Present
<ul style="list-style-type: none"> <li>Managing the club’s finances, including budgeting and expense tracking, to ensure sustainable operations and successful event planning.</li> <li>Coordinating fundraising efforts and sponsorship outreach to support club activities and initiatives.</li> <li>Collaborating with club members to organize hackathons and coding events, fostering a culture of innovation and teamwork among participants.</li> </ul>	
<b>Hindu Student Council</b>   Ohio Wesleyan University, Delaware, Ohio, USA <i>Treasurer and Founding Member</i>	Spring 2023
<ul style="list-style-type: none"> <li>Submitted formal budget requests and organized events to raise awareness of Hindu cultural heritage and provide youth leadership development and volunteer opportunities.</li> </ul>	

<b>Wesleyan Council on Student Affairs (Student Government)</b>   Ohio Wesleyan University, Delaware, Ohio, USA	
<i>Budget Committee Senator</i>	Fall 2022 - Spring 2023
<ul style="list-style-type: none"> <li>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.</li> <li>Awarded WCSA Best New Member Golden Bishop Award for making outstanding contributions to the council's missions, goals, and agenda.</li> </ul>	
<b>The Neurds (Neuroscience Club)</b>   Ohio Wesleyan University, Delaware, Ohio, USA	
<i>Member</i>	Fall 2022 - Spring 2023
<ul style="list-style-type: none"> <li>Presented on AI at Brain Fair 2023 during Brain Awareness Week, bridging neuroscience and technology.</li> <li>Aided event planning and marketing for the club's educational and networking goals.</li> <li>Promoted neuroscience awareness and community service for intellectual and career development.</li> </ul>	
<b>Campus Programming Board</b>   Ohio Wesleyan University, Delaware, Ohio, USA	
<i>Vice President of Finance</i>	Spring 2022 - Fall 2022
<ul style="list-style-type: none"> <li>Successfully planned, created, and implemented budgets totaling over \$86,000 each year for campus events.</li> <li>Initiated and led revamp of organization's governing documents, implementing efficient practices.</li> <li>Negotiated an additional \$10,000 per year with the Wesleyan Council on Student Affairs.</li> </ul>	
<i>Marketing Committee Member</i>	Fall 2020 - Spring 2023
<ul style="list-style-type: none"> <li>Created social media campaigns and print materials to engage students and promote events.</li> <li>Coordinated marketing efforts including posters, tabling, giveaways, and contests to boost attendance at events.</li> </ul>	

## PROJECTS

<b>Datacenter Cooling Optimization using Deep Reinforcement Learning</b>		Fall 2024
Washington University in St. Louis, St. Louis, Missouri, USA		
<ul style="list-style-type: none"> <li>Implemented multiple deep reinforcement learning algorithms (DDQN, PPO, SAC) integrated with EnergyPlus simulations to optimize datacenter cooling systems.</li> <li>Achieved 35.8% energy efficiency improvement over baseline using DDQN, addressing the underserved small to mid-sized datacenter market.</li> <li>Created a comprehensive framework integrating building energy simulation with reinforcement learning for dynamic thermal management.</li> </ul>		
<b>Interactive Storybook</b>   Washington University in St. Louis, St. Louis, Missouri, USA		Fall 2024
<ul style="list-style-type: none"> <li>Developed an interactive storytelling application using Vue.js, Node.js, and MongoDB with AI-powered content generation, enabling users to create branching narrative stories.</li> <li>Implemented OpenAI API integration for dynamic story text and contextual image generation based on user choices.</li> <li>Created a visual path tracking interface to help users navigate complex branching narratives and story progression.</li> </ul>		
<b>Socket.IO Multi-Room Chat Application</b>		Fall 2024
Washington University in St. Louis, St. Louis, Missouri, USA		
<ul style="list-style-type: none"> <li>Developed a feature-rich multi-room chat application using Node.js and Socket.IO with password-protected rooms, private messaging, and user moderation capabilities.</li> <li>Implemented room management features including creator privileges, user tracking, and persistent nickname storage.</li> <li>Created real-time bidirectional event-based communication with responsive design for optimal user experience.</li> </ul>		
<b>PHP Calendar Application</b>   Washington University in St. Louis, St. Louis, Missouri, USA		Fall 2024
<ul style="list-style-type: none"> <li>Developed a feature-rich personal calendar and event management web application using PHP, MySQL, HTML5, CSS3, and JavaScript.</li> <li>Implemented secure user authentication, CSRF protection, SQL injection prevention, and input sanitization.</li> <li>Created an interactive calendar interface with comprehensive event management capabilities including creation, editing, categorization, and tracking.</li> </ul>		
<b>Parkinson's Disease AI Diagnosis Software</b>		Summer 2022
MITxSureStart FutureMakers Create-a-Thon Program, Remote		
<ul style="list-style-type: none"> <li>Developed AIParkinScan software for Parkinson's diagnosis using neural networks, spectrograms, and the Random Forest algorithm trained on audio and image data.</li> </ul>		