Sindhu Vadapalli

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Education

Arizona State University June 2025 – May 2026
Master of Science in Computer Science: with thesis | GPA: 4.0 *Tempe, AZ*

Arizona State University Aug 2021 – May 2025
Bachelor of Science in Computer Science: Minor in Statistics | GPA: 4.0 *Tempe, AZ*

Experience

Research Assistant September 2024 – Present
Self-Organizing Particle Systems Lab, ASU *Tempe, AZ*

- Worked on finding near-optimal solutions for the traveling salesman problem using reinforcement learning. Tested an auction-based heuristic against the greedy nearest-neighbor heuristic.
- Around 85% instances outperformed nearest neighbor with an average of 2.5% cost improvement. Funded by the National Science Foundation REU award.

Software Engineering Intern August 2024 – May 2025
Hidden Gemz *Remote*

- Assisted in development of a real-time, user centered recommendation system using collaborative filtering.
- Integrated Google Maps API to get the distance and time it takes to get to places given location and transportation method. Contributed to testing, system scalability, and streamlining API/database calls for future growth as part of the capstone team. Tools and tech stack: Pandas, NumPy, Sci-kit learn, PostgreSQL

Undergraduate Teaching Assistant August 2022 – December 2024
Ira A. Fulton Schools of Engineering, ASU *Tempe, AZ*

- UGTA for Intro to Theoretical Computer Science, Principles of Programming" and UGTA and Grader "Object Oriented Programming and Data Structures"
- Held weekly office hours; help with exam proctoring; Exam reviews with a student turnover between 60–100.

Research Assistant May 2024 – November 2024
The Virtualized Infrastructures, Systems, and Applications Lab, ASU *Tempe, AZ*

- Assisted in developing machine learning models for stress prediction using biometric data (MET) from over 6000 Fitbit samples collected from police cadets.
- Improved model accuracy from 68.83% to 79.75% through hyperparameter tuning and effective interval identification. Conducted data preprocessing, including cleaning and feature extraction, utilizing Pandas, NumPy, and scikit-learn.

Projects

Cookin: your AI chef buddy! | *React native, RN Executorch, LLaMA 3 model* June 2025

- Developed an AI app using React Native and Executorch to make cooking and meal planning easy.
- Used React Native Executorch to incorporate on-device LLaMA 3 model to help users curate recipes.
- Implemented speech-to-text (STT) using react-voice along with text input to cater to various users.
- Prompt engineered to fine-tune recipe outputs for accuracy and creativity. Shipped the app to App Store, ensuring optimized performance and responsive UI.

LingoVerse | *MongoDB, Express.js, React, Node.js* August 2024

- Built a full-stack language learning application enabling users to create, categorize, and review flashcards.
- Implemented user authentication system using encrypted passwords with bcrypt for secure login functionality.
- Developed RESTful API endpoints in Express.js to handle user registration and login logic.
- Led an Agile team and implemented 2-week sprint cycles to ensure efficient progress and collaboration.

Technical Skills and Awards

Languages: Java, Python, C/C++, SQL, C#, JavaScript, HTML/CSS, Swift
Frameworks: React, Node.js, Flask, JUnit, PyTorch, React Native, .NET
Developer Tools: Git, Jupyter Notebook, VS Code, Visual Studio, Eclipse
Certificates: Deep Learning Specialization by DeepLearning.AI from Coursera
Awards: Dean's List, FURI award, National Science Foundation REU award, ASU NAMU - Provost's Award