Sindhu Vadapalli

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Education

Arizona State University **Expected May 2026**
Masters of Science in Computer Science: with thesis *Tempe, AZ*

Arizona State University **Aug. 2021 – May 2025**
Bachelor of Science in Computer Science *Tempe, AZ*

Relevant Coursework

- Data Structures and Algorithms
- Database Management
- Artificial Intelligence
- Bio-Inspired computing
- Design and Analysis of Algorithms
- Foundations of Machine Learning

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 (Capstone Project) **August 2024 – May 2024**
Hidden Gemz *Remote*

- Assisted in development of a real-time, user centered recommendation system using collaborative filtering.
- Implemented using 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. 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 - Held 1 hour of weekly office hours; help with exam proctoring; 2 exam reviews for midterms with an approximate 200 student turnover.
- UGTA for "Principles of Programming" and UGTA and Grader "Object Oriented Programming and Data Structures".

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

- Assisted on a project that used machine learning models to predict stress using biometric data collected from police cadets using Fitbits. Used tools like TensorFlow, Sci-kit Learn, NumPy.

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**

- Developed a full-stack language learning application using MongoDB, Express.js, React, and Node.js. Implemented user authentication and login and flashcards categorized by topics to enhance learning.

EffortLogger: track teams' progress | *Java, Eclipse, JavaFX* **August 2023**

- Developed an interactive application that helps users log daily efforts using JavaFX, Java, and FXML. Led an Agile team and implemented a 2-week sprint cycle to ensure efficient progress and collaboration.

Technical Skills and Awards

Languages: Python, Java, C/C++, HTML/CSS, JavaScript, SQL, Swift
Developer Tools: VS Code, Eclipse, Jupyter Notebooks, Xcode, Firebase
Technologies/Frameworks: React Native (Expo), React, GitHub, JUnit, Jira
Awards: Dean's List (every semester), FURI award, National Science Foundation REU award, New American University - Provost's Award