

# SAI ROSHAN RAO NELAVALLI

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## EDUCATION

### **Masters in Computer Science**

Arizona State University, Tempe, AZ.

*December 2025*

**CGPA: 4.0/4.0**

### **Bachelor of Science in Computer Science**

Arizona State University, Tempe, AZ.

*December 2024*

**CGPA: 3.8/4.0**

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## TECHNICAL SKILLS

**Programming Languages:** Java, C/C++, Python, JavaFX, R, Perl, SQL, HTML, CSS, JavaScript, Scheme, Prolog, Bash.

**Tools and OS:** AWS, Visual Studio, Git, GitHub, Windows, MacOS, Linux/Unix, ReactJS, Flask, SpringBoot JUnit, AWS, Django, MySQL, PostgreSQL.

**Courses:** Object-Oriented Program, Digital Design, Data Structures and Algorithms, Assembly Lang Prog, Computer Arch, Operating Systems, Intro to Software Engineering, Information Assurance, Principles of Programming Lang, Theoretical Computer Sci, Software QA and Testing, Machine Learning, Database Management.

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## PROFESSIONAL EXPERIENCE

### **Undergraduate Teaching Assistant**

**Arizona State University**

*August 2023 – May 2024*

**Tempe, AZ**

Employed as a UGTA for CSE 464 (Software Quality Assurance and Testing)

- Administrated lectures, tutorials, and student support for CSE 464, guiding students in comprehending and implementing software and constructing test plans to evaluate functionality.
- Conducted code reviews, gave feedback, and led lab sessions. Collaborated on course material development and assessment. Maintained effective communication with students and addressed concerns.

### **Lab Assistant**

**Arizona State University**

*August 2023 – May 2024*

**Tempe, AZ**

Appointed as a Lab Assistant for Digital Designing

- Mentored students in practical labs related to Digital Design, directing them on GPU functionalities, as well as designing and testing small components using Verilog and TCL.
- Performed code reviews, furnished feedback, and conducted lab sessions, contributing to development and evaluation of course materials.

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## ACADEMIC PROJECTS

### **Smart Sound to Speech Interpreter**

*December 2024*

- Engineered a real-time audio recognition system that converts important notifications and security alarms into spoken messages for enhanced accessibility. Leveraged Python with spectrogram analysis and local maxima detection, Flask for the web interface, and pyttsx3 for text-to-speech.
- Integrated an SQLite database for sound-to-message mapping and logging, ensuring efficiency and reliability. Coordinated a modular design to support scalability and easy customization.

### **Fake News Detection Using Machine Learning.**

*September 2023*

- Developed and conceived a predictive model to detect fake news, utilizing Python and TensorFlow. Initiated use of NLP for feature extraction, enhancing model's accuracy by comparing various algorithms.
- Innovated by implementing a Convolutional Neural Network (CNN) / Recurrent Neural Network (RNN) model for complex text analysis, achieving a 90% accuracy rate through thorough testing and optimization.

### **E-Learning lab**

*August 2023*

- Directed and Collaborated in a team to develop an LMS platform for underprivileged kids in South Africa, crafting front end with HTML, CSS, and JavaScript, and Python with Django for backend, incorporating PostgreSQL.
- Engineered key features such as student registration, login, and progress tracking, and orchestrated integration of Docker, REST, and GitHub for efficient development.

### **Automation of Sun Devil Pizza**

*September 2022*

- Developed a web-based pizza ordering system using Java, HTML, and JavaFX with a focus on system scalability and fault tolerance.
- Applied Jira and GitHub for efficient agile development and tested the system for distributed deployment.