

SRI UJJWAL REDDY BEEREDDY

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EDUCATION

Arizona State University

Bachelor of Science in Computer Science (Software Engineering), Minor in Entrepreneurship

Tempe, AZ

Aug 2022 – May 2026

EXPERIENCE

Software Engineering Intern (Machine Learning)

Jul 2024 – Present

Geometric Media Lab

Tempe, AZ

- **Developed a Machine Learning Pipeline** using *Python* and *scikit-learn* to **improve gunshot detection accuracy by 60%** on **10+ hours** of audio data.
- **Optimized deployment on Raspberry Pi** through **hardware-specific adjustments**, ensuring real-time performance in resource-constrained forest environments.
- **Enhanced model robustness** by implementing a dynamic feedback loop to continuously refine predictions and improve noise differentiation, securing scalable analysis under diverse conditions.

Software Engineering Intern (Machine Learning)

Jan 2023 – Dec 2024

ASU Biodesign Institute

Tempe, AZ

- **Automated DNA-PAINT image analysis** using *Python* and *k-means clustering*, reducing **processing time from 4 hours to 10–30 minutes** per image and providing actionable metrics.
- **Enhanced research capabilities** by developing an end-to-end data pipeline delivering granular movement data, transforming traditional nanotech workflows into ML-driven, high-impact research tools.

Software Engineer

Aug 2024 – Present

Mesa Historical Museum (EPICS)

Tempe, AZ

- **Developed an interactive website** using *JavaScript*, *React*, and *Three.js*, **increasing visitor engagement by 20%** and offering an engaging digital tour of museum collections.
- **Directed a 7-member team** to implement scalable content management and ensure sub-second website response times, optimizing the digital visitor experience.

Software Engineer

Jan 2024 – Oct 2024

Software Developers Association (SoDA)

Tempe, AZ

- **Automated test case uploads** using a *Selenium*-based scraper, **reducing upload time by 98%** for **200+ files** and streamlining annual code challenge processes.
- **Developed a Flask application** that boosted **operational efficiency by 50%** and enhanced **engagement for 600+** active members.

LEADERSHIP EXPERIENCE

- Led teams to win **4 hackathons** sponsored by *Honeywell*, *DAASH*, and *ASU*, guiding 15+ developers to competition success
- Rose from Intern to **Technical Director** at *SoDA*, managing 12 engineers to deliver technical workshops for 600+ club members

PROJECTS

Amano – Emotion-Based Song Recommendation System | *Flask, Spotify API, OpenAI API, AWS EC2*

- **Enhanced Spotify's song recommendation system** using *Flask* and *Python* hosted on *AWS EC2* that integrates with the **Spotify API** to provide personalized song suggestions using **Reinforcement Learning**.
- **Improved user experience** with a real-time **ChatGPT LLM chatbot** that analyzes mood and sends data to the reinforcement model for dynamic song recommendations, functioning like a personal DJ.

Mine Alliance – Fullstack Sustainable Mining Website | *React, Flask, SQLAlchemy, AWS, OpenAI GPT-4, TailwindCSS*

- **Reduced environmental assessment response times by 40%** by leading the development of a **fullstack platform** that integrated **ChatGPT-4 API** for mining site impact assessments.
- Utilized **SQLAlchemy, Flask, AWS EC2**, and geospatial mapping with Leaflet, resulting in increased stakeholder engagement.

Market Anomaly Detection (MAD) | *Python, Streamlit, Scikit-learn, GEMINI, Jupyter Notebook*

- **Developed an anomaly detection system** using *Python* and *Streamlit* to identify potential financial market crashes, utilizing **Streamlit** for an interactive user interface and **Scikit-learn** for model training and tuning.
- **Enabled user-driven customization and improved performance** with features like **GEMINI-powered chatbot**, automated model tuning, and support for supervised and unsupervised learning pipelines.

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, TypeScript, C#, SQL, HTML, CSS

Frameworks & Libraries: Flask, React, Node.js, scikit-learn, three.js, pandas, numpy

Tools & Environments: Streamlit, Docker, AWS, Linux, Git, GitHub, Selenium, Google Colab, Jupyter Notebooks, Microsoft Azure

Machine Learning & AI: Neural Networks, GEMINI API, Deep Learning, Reinforcement Learning, Unsupervised Learning