Sri Ujjwal Reddy Beereddy

571-523-7182 | srisubspace@gmail.com | linkedin.com/in/sriujjwal | github.com/sbeeredd04

Education

Arizona State University (4.0 GPA) Tempe, AZ

Bachelor of Science in Computer Science (Software Engineering), Minor in Entrepreneurship *Aug 2022 – May 2026*

Experience

Software Engineering Intern (Machine Learning) Jul 2024 – Present

Geometric Media Lab *Tempe, AZ*

- **Developed a hybrid ML pipeline** using **k-means clustering** with a supervised **neural network** for gunshot detection, improving **accuracy from 20% to 80%** on **10+ hours** of audio data using *Librosa* and iterative model refinement.
- **Optimized edge deployment** for *Raspberry Pi* by integrating hardware-specific adjustments and a custom microphone setup, ensuring real-time performance in resource-constrained forest environments.
- **Enhanced model robustness** via 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*

- **Developed an end-to-end data pipeline** to automate DNA-PAINT image analysis by integrating **k-means clustering** and custom tracking algorithms, reducing **processing time from 4 hours to 10–30 minutes** per image.
- **Advanced research capabilities** by delivering granular movement data and actionable metrics, transforming traditional nanotech workflows into ML-driven, high-impact research tools.

Software Engineer Aug 2024 – Present

Mesa Historical Museum (EPICS) *Tempe, AZ*

- **Built an immersive digital experience** by developing an interactive website using **React** and *Three.js*, **increasing visitor engagement by 20%** and offering an engaging digital tour of museum collections.
- **Led cross-functional teams** by **directing 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 operational workflows** by reducing **test case upload time by 98%** using a **Selenium**-based **scraper for 200+ files**, streamlining annual code challenge processes.
- **Optimized membership systems** by developing a *Flask-Next.js* application that boosted **operational efficiency by 50%** and enhanced **engagement for 600+** active members.

Leadership Experience

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

Projects

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

- **Developed a song recommendation system** by developing a backend using **Flask hosted on AWS EC2** that integrates with the **Spotify API** to provide personalized song suggestions using **Reinforcement Learning**.
- **Enhanced user experience** with a real-time **ChatGPT LLM chatbot** that analyzes mood and sends data to the reinforcement model for dynamic song recommendations.

Mine Alliance – Fullstack Sustainable Mining Website | *Next.js, 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, hosted on **AWS**.
- Implemented **SQLAlchemy** with **Flask** for backend logic and integrated **geospatial mapping with Leaflet**, improving stakeholder engagement.

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

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

Technical Skills

Languages: Python, C#, Java, JavaScript, TypeScript, C/C++, SQL, HTML, CSS, Flutter
Frameworks & Libraries: Flask, Django, React, TensorFlow, PyTorch, scikit-learn, OpenCV, three.js, pandas, numpy
Tools & Environments: Streamlit, Docker, AWS, Linux, Git, GitHub, Selenium, Google Colab, Jupyter Notebooks
Concepts: Object Oriented Programming, Data Structures, Software Engineering Techniques, Quality Assurance, Parallel Programming, Databases, Networking