Sri Ujjwal Reddy Beereddy

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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*
- **Engineered a hybrid ML pipeline:** Combined k-means clustering with a supervised neural network for gunshot detection, boosting **accuracy from 20% to 80%** on **10+ hours** of audio data processed via *Librosa* and iterative model refinement, demonstrating **strong problem-solving skills**.
- **Optimized edge deployment:** Tailored the pipeline for Raspberry Pi by integrating hardware-specific adjustments and a custom microphone setup, ensuring real-time performance in resource-constrained forest environments, showcasing experience in **application development**.
- **Enhanced model robustness:** Implemented a dynamic feedback loop to continuously refine predictions and improve noise differentiation, securing scalable analysis under diverse conditions, essential for thriving in a **fast-paced environment**.

Software Engineering Intern (Machine Learning)   Jan 2023 – Dec 2024
ASU Biodesign Institute   *Tempe, AZ*
- **Developed an end-to-end data pipeline:** Automated DNA-PAINT image analysis by integrating k-means clustering and custom tracking algorithms, slashing **processing time from 4 hours to 10–30 minutes** per image, **driving exciting initiatives** in research.
- **Advanced research capabilities:** Delivered granular movement data and actionable metrics, transforming traditional nanotech workflows into ML-driven, high-impact research tools, essential for solving problems both **big or small**.

Software Engineer   Aug 2024 – Present
Mesa Historical Museum (EPICS)   *Tempe, AZ*
- **Built an immersive digital experience:** Developed an interactive website using *React* and *Three.js*, **increasing visitor engagement by 20%** and offering an engaging digital tour of museum collections, showing **strong problem-solving skills**.
- **Led cross-functional teams: Directed a 7-member team** to implement scalable content management and ensure sub-second website response times, optimizing the digital visitor experience, displaying ability to play well with others in a **high-functioning team environment**.

Software Engineer   Jan 2024 – Oct 2024
Software Developers Association (SoDA)   *Tempe, AZ*
- **Automated operational workflows:** Reduced **test case upload time by 98%** using a *Selenium*-based scraper for **200+ files**, streamlining annual code challenge processes, showing strong attention to **detail**.
- **Optimized membership systems:** Developed a *Flask-Next.js* application that boosted **operational efficiency by 50%** and enhanced **engagement for 600+** active members, showcasing ability to thrive in a **fast-paced environment**.

Leadership Experience

- **Led teams** to win **4 hackathons** sponsored by *Honeywell*, *DAASH*, and *ASU*, guiding 15+ developers to competition success, exemplifying the ability to **drive several exciting initiatives**.
- Rose from Intern to **Technical Director** at *SoDA*, managing 12 engineers to deliver technical workshops for 600+ club members, displaying the ability to **drive several exciting initiatives** and provide **mentorship**

Projects

Amano – Emotion-Based Song Recommendation System | *Flask, Spotify API, OpenAI API, AWS EC2*
- **Improvised Spotify's 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**, showcasing experience in **web development**.
- **Enhanced 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, showcasing **intellectual curiosity**.

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, showing experience in **web development**.
- Utilized **SQLAlchemy, Flask, AWS EC2**, and **geospatial mapping with Leaflet**, resulting in increased stakeholder engagement, demonstrating ability to work with the **latest technologies**.

Market Anomaly Detection (MAD) | *Python, Streamlit, Scikit-learn, GEMINI, Jupyter Notebook*
- **Developed an anomaly detection system** to identify potential financial market crashes, utilizing *Streamlit* for an interactive user interface and *Scikit-learn* for model training and tuning, showcasing **strong problem-solving skills**.
- **Enabled user-driven customization and improved performance** with features like *GEMINI*-powered chatbot, automated model tuning, and support for supervised and unsupervised learning pipelines, displaying **intellectual curiosity**.

Technical Skills

Languages: Python, C/C++, Java, JavaScript, **TypeScript**, C#, SQL, HTML, CSS, Flutter
Frameworks & Libraries: Flask, Django, React, **Angular**, TensorFlow, PyTorch, scikit-learn, OpenCV, three.js, pandas, numpy, **Ionic**, **.NET**
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