
Sri Ujjwal Reddy Beereddy

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Education

Arizona State University

May 2026

Computer Science (Software Engineering) (BS) — **GPA: 4.0**

Entrepreneurship and Innovation Certificate

Relevant Experience

Research Data Analyst

Jan 2023 – Present

BIONICS Lab — Tempe, AZ

- **Reduced imaging error rates by 40%** by automating analysis protocols for **DNA-PAINT Images**, cutting processing time from **4 hours to 10 minutes for over 2000 entities** in a single image.
- **Increased project efficiency by 30%** by designing a custom data analysis tool for image filtering, curve fitting, and reducing human error in entity analysis and presentations.

Software Developer

Jan 2024 – Present

Software Developers Association — Tempe, AZ

- **Boosted organizational efficiency by 50%** by automating the points system and event invitations, reducing manual work from 30-60 minutes to instant updates for **600+ members** using an **Internal API system**.
- **Increased event attendance by 50%**, growing participation from 100 to 150-200 attendees per event, through real-time communication and management of SoDA's Distinguished Membership Program.

Lead Software Engineer

Aug 2024 – Present

Mesa Interactive Exhibit (EPICS) — Tempe, AZ

- **Increased visitor engagement and satisfaction by 20%** by leading a team of 7 to develop interactive software using **Next.js** and **Three.js**, improving user experience and scalability.
- **Streamlined content management and scalability** by integrating a database management system, ensuring smooth content updates and system maintenance.

Projects

Avisol – Automated Air Traffic Pathfinding System *JavaScript, Cost/Priority Index, Algorithm Optimization*

- Reduced air traffic **route computation time to under a minute** by developing an algorithm using Dijkstra and Cost/Priority Index, improving the **management of 10,000+ autonomous vehicles**, and **winning the Most Innovative Idea Award at Devil's Invent Hackathon**.

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**.
- **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.

ImageInsight – Web-Based Data Analysis Tool *Django, SQLite, Unsupervised ML, Data Visualization*

- Increased research **productivity by 40%** for postdoctoral researchers by designing a web tool using **Django** and **Unsupervised machine learning**, which reduced **image analysis time from hours to minutes** and automated complex data analysis tasks.

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. Utilized **SQLAlchemy, Flask, AWS EC2**, and **geospatial mapping with Leaflet**, resulting in increased stakeholder engagement.

Skills

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

Frameworks & Libraries: Django, Flask, React, scikit-learn, OpenCV, TensorFlow, three.js, numpy, pandas, matplotlib

Tools & Environments: Git, Node.js, Docker, AWS, Linux, Visual Studio Code, Selenium, Slack, Google Colab

Professional Skills: Leadership, Problem-Solving, Critical Thinking, Effective Communication, Creativity, Innovative Thinking, Time Management, Project Management

Additional skills and projects available on <https://github.com/sbeeredd04>.