

KARRI PUJITH SRI SAI

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Aspiring Full-Stack Developer | Backend Engineer | AI/ML Engineer | Software Developer

Experience

Smart India Hackathon – Space Mission Failure Prediction System 2024

React, Node.js, MongoDB, Python, Machine Learning

- Developed an end-to-end framework to monitor space missions and predict potential mission failures using machine learning models.
- Designed and deployed a prediction system achieving 98% accuracy on validation datasets.
- Built real-time React dashboards with optimized alert flows, improving monitoring efficiency and UI responsiveness.

AI/ML Project Developer – Drone-Based Student Identification System 2023

Python, PyTorch, OpenCV, CNNs

- Developed a real-time student identification system integrated with a drone for university surveillance.
- Designed and assembled the drone platform to support real-time monitoring and onboard AI integration.
- Optimized the inference pipeline, reducing recognition latency by ~35% while maintaining detection reliability in dynamic environments.

Projects

Smart India Hackathon-Intelligent Space Mission Monitoring System (React, Node.js, MongoDB, Machine Learning) 2024

- Built a full-stack monitoring platform to analyze mission parameters and predict potential failures.
- Developed RESTful APIs using Node.js and integrated MongoDB for real-time mission data storage.
- Designed responsive React dashboards and implemented an ML model achieving 98% prediction accuracy.

Rubik's Cube Interactive Web Application (React, JavaScript, Vite) 2024

- Developed an interactive Rubik's Cube simulator with dynamic state management and rotation logic.
- Optimized component rendering to improve UI responsiveness and performance.
- Deployed the application using Vercel with production-ready build configuration.

Quantum AI Blog Website (HTML, CSS, JavaScript, GitHub Pages) 2024

- Built a modern, responsive blog website presenting structured technical content on Quantum AI.
- Enhanced user experience using optimized typography, smooth transitions, and responsive design principles.
- Deployed on GitHub Pages with cross-browser compatibility and performance optimization.

Research Experience

Neural Machine Translation for Low-Resource Indian Languages: English–Telugu and English–Tamil Using Meta's NLLB Nov 2025

- Adapted Meta's NLLB-200 model for Telugu & Tamil languages by addressing morphological richness and token alignment challenges.
- Optimized decoding and preprocessing to improve BLEU and ChrF++ scores.

NC2X: Neuro-Symbolic Framework for Causal and Context-Aware Explainability Nov 2025

Under Review – IEEE INDIACom

- Proposed a hybrid neuro-symbolic architecture combining visual perception with structured relational reasoning.
- Introduced a causal intervention strategy using visual masking, observing >52% confidence variation to quantify contextual dependence.

Certifications

Full-Stack Web Development Certification — 2024

Built dynamic, database-driven web applications using HTML, CSS, Bootstrap, JavaScript, PHP, and SQL.

Technical Skills

Programming: Python, C++, JavaScript, DSA

AI/ML: PyTorch, CNN, Model Training, Computer Vision, Data Preprocessing

Frontend: React, HTML, CSS, Tailwind CSS, Bootstrap, ThreeJS

Backend & Databases: MongoDB, SQL, NodeJS, ExpressJS, REST APIs, Vite

Tools: Git, GitHub, VS Code, Vercel, AntiGravity, Postman

Education

B.Tech in Computer Science and Engineering (AI/ML) 2023 – 2027

Bennett University

CGPA: 8.21 / 10