

CHEDEMALA BALAJI PRANEETH KAMAL

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[LinkedIn](#)

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[Portfolio](#)

EXPERIENCE

Software Engineer Intern

Dec 2024 – Feb 2025

RedCrix

Mohali

- Designed and optimized a high-performance backend pipeline using Flask and OpenCV, improving throughput by 30% and reducing memory footprint for large-scale image operations.
- Built fault-tolerant processing workflows with automated retries, validation checks, and logging to ensure 95% accuracy across 300+ production test cases.
- Optimized image handling with automatic resizing and JPEG compression, reducing processing time and memory usage by over 30% on large files.

Data Science Intern

Jun 2025 – Aug 2025

AI4SEES

Bangalore

- Engineered a distributed 6D object pose estimation pipeline using YOLOv5-6D, OpenCV, and COLMAP to accurately detect and align 3D models for robotics and AR use.
- Collected and trained on 1,500+ high-quality images with Blender-based synthetic data, reaching under 6° rotation error and 3 cm position error, better than baseline results.
- Collaborated within a cross-functional team to integrate calibration, labeling, and dataset generation tools, ensuring reproducibility, scalability, and efficient workflows across multiple environments.

PROJECTS

Connectify | *MongoDB, Express.js, React, Node.js, Cloudinary, Socket.io*

- Built scalable REST-style backend APIs with real-time WebSocket communication for 60+ concurrent users, deployed securely on AWS EC2 using cloud-based media handling.
- Developed a modular React frontend (JavaScript, HTML/CSS) enabling seamless low-latency messaging and enterprise-grade web interaction.

Cloud Infrastructure Monitoring & Alerting System | *AWS, Terraform, Docker, Prometheus, Grafana*

- Provisioned AWS EC2 infrastructure using Terraform and deployed a containerized observability stack (Prometheus, Grafana, Node Exporter) via Docker Compose for real-time system monitoring.
- Implemented automated alert rules and health dashboards for CPU, memory, and disk usage, simulating production-grade monitoring and incident response workflows.

EDUCATION

National Institute Of Technology Sikkim

CGPA: 8.55, Bachelor Of Technology, Computer Science and Engineering

Ravangla, Sikkim

Nov 2022 – Jun 2026

TECHNICAL SKILLS

Languages: Python, C/C++, SQL (MySQL), MongoDB, JavaScript

Libraries & Frameworks: Pandas, NumPy, React, Node.js, Flask, Tensorflow, Keras, OpenCV

Developer Tools: GitHub, VS Code, Conda, AWS, Docker

DevOps & Cloud : Docker, GitHub Actions CI/CD, Linux, Prometheus, Grafana, AWS, Terraform(Basics)

CS Core : Data Structures & Algorithms, Software Engineering, Machine Learning, Operating Systems, Database Management Systems, Computer Networking, System Design Basics, Distributed Systems, Cloud Architectures

Soft Skills: Collaboration, teamwork, problem-solving skills, communication skills, analytical

ACHIEVEMENTS

- LeetCode** – Solved **300+ problems** on LeetCode (Top 30% global), covering Arrays, strings, graphs, sliding window, greedy, trees
- Finalist** – **Smart India Hackathon 2025** (National-level innovation challenge among 10,000+ teams)

CERTIFICATIONS

- AI/ML for Geodata Analysis – **ISRO, IIRS**
- Data Science – **AI4SEE**
- Web Dev – **RedCrix**