ANNAVARAPU VENKATA NAGA KARTHIK

Vijayawada, Andhra Pradesh, India

+91 9640940798 — Email — LinkedIn — GitHub — LeetCode — CodeChef

EDUCATION

Prasad V Potluri Siddhartha Institute of Technology, Vijayawada   *2023–2027*
B.Tech in Computer Science and Engineering   CGPA: **9.49 / 10**

TECHNICAL SKILLS

- **Backend Development:** Node.js, Express, REST APIs, Microservices Architecture, JWT, OAuth 2.0
- **Databases:** MongoDB (Schema Design, Indexing, Aggregation), MySQL, Redis
- **Programming Languages:** Java, Python, C++, JavaScript, TypeScript
- **Core CS:** Data Structures, Algorithms, OS, DBMS, System Design Fundamentals
- **Cloud & DevOps:** AWS (EC2, S3, IAM), Docker Basics, CI/CD Fundamentals, Linux, Bash, Networking
- **Web Technologies:** MERN Stack, React, WebSockets

INTERNSHIP

IIT Ropar – NPTEL Internship   *May–Jul 2025*
Full Stack Intern (Backend-Focused)

- Architected scalable backend services integrating Google, Facebook, and X (Twitter) APIs using Node.js, Express, and MongoDB.
- Reduced API latency by **35%** by implementing **MongoDB indexing** strategies, aggregation pipelines, and advanced query optimization techniques.
- Engineered secure authentication and authorization systems using **JWT and OAuth 2.0**, ensuring reliable cross-platform access control for distributed users.
- Automated deployment workflows and server provisioning using **Linux shell scripting**, reducing environment setup time by **60%**.

PROJECTS

Clearify — Peer-to-Peer Online Learning Platform   *2025*
GitHub Repository

- Built an online learning platform enabling peer-to-peer collaboration using React, Node.js, and WebSockets.
- Implemented real-time chat and video conferencing to support interactive learning experiences.
- Reduced API response time from **270ms to 5ms** by implementing Redis-based caching, MongoDB indexing, and optimized query execution.
- Conducted performance testing using Apache JMeter with **50 concurrent users**, achieving an average server response time of **180ms**.

Smart Event Manager — MERN Stack   *2025*
GitHub Repository

- Developed a distributed platform capable of handling high-concurrency event registration and management.
- Designed **10+ production-grade REST APIs**, improving system throughput by **30%** through schema optimization and server-side caching.
- Implemented **Smart Account Linking** to resolve user identities across Google, Facebook, and X using primary email resolution with OAuth 2.0.
- Integrated Service Workers for real-time background notifications, ensuring user engagement even during application inactivity.

Resume Parser & Job Description Match Analyzer — Gemini API   *2025*
GitHub Repository

- Developed an AI-powered tool to analyze resumes against job descriptions and evaluate role alignment.
- Integrated Google Gemini API to extract required skills, missing keywords, and job-specific requirements from unstructured text.
- Generated ATS match percentage scores and actionable feedback to optimize resumes for recruiter screening.

CERTIFICATIONS

NPTEL Java Programming (Top 1% Nationwide)
AWS Cloud Architecting and Cloud Foundations
Cisco Networking Academy — Network Technician Path