Chaganti Venkatarami Reddy

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Education

Indian Institute of Information Technology Sonepat — Haryana, India
B. Tech, Computer Science & Engineering - 9.57 GPA ***(Gold Medalist)*** — *Dec 2020 – May 2024*

Experience

Software Developer Intern — Aug 2025 – Present
Hexagon R&D — *Hyderabad, India*

- Contributed to rewriting existing Node.js microservices in **Rust** using async/await, helping the team reduce P99 latency by 50% and cut infrastructure costs by 20% after deployment.
- Engineered a concurrent client-to-S3 multi-part upload API utilizing parallel chunk processing algorithms, slashing large-file transfer latency by **83%** (4 min to 40 sec) and optimizing throughput.
- Developed parts of a **gRPC**-based backend in Dart, enabling bi-directional streaming and contributing to a 40% reduction in API payload size compared to previous REST endpoints.
- Worked on an internal cleanup module that integrated Nest.js APIs with Rust workers, supporting the removal of 7,000+ orphaned documents and helping reduce database storage usage by 30%.

Software Developer Intern — June 2025 – July 2025
PRECA Solutions — *Hyderabad, India*

- Built individual ERP modules using Next.js and PostgreSQL, improving workflow organization across manufacturing teams.
- Implemented RBAC and added targeted query indexes, contributing to a 20% improvement in API response times for 1,000+ concurrent active users.
- Wrote 30+ PostgreSQL triggers to automate routine supply-chain steps, reducing manual work by 50%.

Artificial Intelligence Research Assistant — Feb 2024 – May 2025
Mahindra University — *Hyderabad, India*

- Implemented WGAN-based data augmentation for limited EEG datasets under faculty supervision, improving motor-imagery classification accuracy to 72%.
- Fine-tuned transformer NLP models for legal-judgment prediction (achieving 82% accuracy) and helped build ETL pipelines using GPT, LangChain, Docker, and AWS for scalable experiments.
- Developed a Q-learning prototype for adaptive traffic-signal control in simulation, showing a 40% congestion reduction and 15% lower wait times.
- Automated Python scripts for web-metric analysis, increasing evaluation throughput by 30% and improving dataset reliability by 8%.

Projects

RustServe Studio | *Rust, Transformers, ReactJS* | GitHub — Oct 2025

- Built a Rust-based API using Axum for running concurrent symbolic-computation tasks with low overhead.
- Implemented a custom tokenizer and parser achieving 89% parsing accuracy, using memory-safe patterns (Arc/Mutex) to manage shared state.

AI Resume Analyser | *ReactJS, Router, PuterJS* | GitHub & Demo — Aug 2025

- Developed a serverless resume-analysis tool using Puter.js for in-browser file operations.
- Optimized routing + state logic to deliver real-time analysis with ¡100ms interaction latency.

Publications

Venkat., *et al. Advanced Computer Vision Techniques for Football Match Analysis, ICAIET 2025, pp. 1–6,* IEEE
Venkat., *et al. Optimizing Traffic Signal Control Using RL, SOCTA 2024, vol. 1344, pp. 235–244, Springer* LNNS
Venkat., *et al. Blockchain-driven Production Network for Agri-Food Supply Chains, Accepted at HITA 2024*
Venkat., *et al. Improving Web Page Quality through Empirical Analysis of Metrics, Accepted at HITA 2024*

Technical Skills

Languages: Rust, Python, C/C++, Java, TypeScript, SQL (PostgreSQL), Bash
Frameworks: FastAPI, Flask, Axum, Next.js, TensorFlow, PyTorch, Transformers
Databases & Cloud: PostgreSQL, Supabase, AWS (EC2, S3), Docker
Developer Tools: Git, Linux, VS Code, REST APIs, CI/CD (GitHub Actions)