Chaganti Venkatarami Reddy

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EDUCATION

- **Indian Institute of Information Technology Sonepat** — Haryana, India
  Bachelor of Technology - Computer Science & Engineering; CGPA: 9.57/10.00 — December 2020 - May 2024
  Relevant Coursework: *Programming, Data Structures, Algorithms, Databases, OS, Web Dev, ML, Soft Computing*

- **Board of Intermediate Education** — Andhra Pradesh, India
  MPC; GPA: 9.75/10.00 — April 2018 - March 2020

EXPERIENCE

- **PRECA Solutions - Software Developer Intern** — Hyderabad, India
  Modular ERP System — June 2025 - Present
  - Designed and implemented 6+ modular ERP modules using NextJS, Supabase, and PostgreSQL, improving inter-departmental data flow efficiency.
  - Integrated dynamic filters, role-based dashboards, and 12+ scalable APIs, enabling real-time access to data for 80+ active users across teams.
  - Automated 30+ routine workflows with logic-based triggers, reducing manual effort by 50% and setting the foundation for AI-powered insights.

- **Mahindra University** — Hyderabad, India
  Research Assistant — February 2024 - May 2025
  - Implemented **Wavelet Generative Adversarial Networks (WGANs)** to augment limited EEG datasets for motor imagery classification, boosting BCI system accuracy to **72%** and providing more signal(synthetic) data for training.
  - Pioneered transformer-based NLP framework for Judgement prediction (**82% accuracy**), implementing **GPT & Langchain** powered data labeling and **HPC-accelerated training** through automated ETL pipelines.
  - Streamlined NLP model deployment via **Docker** containerization, ensuring consistent cross-platform execution and scalable cloud integration.
  - Architected **Q-learning traffic optimization** system reducing urban congestion by **40%** while improving flow efficiency (**+25%**) and lowering wait times (**15% reduction.**)
  - Automated web metric analysis using Python, boosting evaluation throughput by **30%** while elevating quality benchmarks by **15%**.

- **IIT Bombay - Machine Learning Research Intern** — Hybrid
  Project: Aadhar Masking - PDF Edition — October 2022 - April 2023
  - Engineered computer vision-based **Aadhar masking** system using **Python**, **OpenCV**, and OCR tools, achieving a **20% improvement** in processing speed. Designed a **mathematical rotational algorithm** to accurately track and mask numbers from all orientations.
  - Automated PDF processing workflows with **bash scripting**, cutting manual intervention by **40%**

PROJECTS & CONTRIBUTIONS

- **Legal Asistant using Agents**: A Streamlit-based app that lets you ask questions or get a summary of legal advices based on your data/text using multi-level agents. Tech: Python, LangChain, StreamLit [**May 2025**] - [GitHub](#) & [Demo](#)
- **YouTube Chatbot using RAG**: A Streamlit-based app that lets you ask questions or get a summary of any YouTube video using its transcript, powered by RAG. Tech: Python, LangChain, StreamLit [**April 2025**] - [GitHub](#) & [Demo](#)
- **Face Mask Detector**: Trained a **computer vision model** for detecting face masks in **static images and real-time video streams**, achieving **99.2% accuracy**. Tech: Python, OpenCV, Keras. [**IIIT Sonepat, Nov 2021**] - [GitHub](#)

PUBLICATIONS

- **Abhijit, M.** & **Chaganti, V. R.**, *et al.* *Optimizing Traffic Signal Control Using Reinforcement Learning* - Accepted at *Proceedings of the 9th International Conference on SoCTA 2024* (**Springer Nature**).
- **Chaganti, V. R.** & **Rahul, J.**, *et al.* *Blockchain-driven Roundabout Production Network: Ensuring TTT in Agri-Food Supply Chains* - Accepted at *Proceedings of the International Conference on HITA 2024* (**LNNS, Springer Nature**).
- **Chaganti, V. R.** & **Mukesh Mann**, *et al.* *Improving Web Page Quality through Empirical Analysis of Web Metrics* - Accepted at *Proceedings of the International Conference on HITA 2024* (**LNNS, Springer Nature**).

SKILLS SUMMARY

- **Languages**: C, C++, **Python**, Java, SQL, Bash, HTML/CSS, JavaScript
- **Frameworks**: **TensorFlow**, **PyTorch**, LangChain, LangGraph, Transformers , Hugging Face, YOLO, StreamLit
- **Deployment**: **Docker**, Git, **Linux/Windows**, HPC, Gitlab CI/CD, FastAPI
- **Data Engineering**: ETL Pipelines, Automation Scripting, Debugging, Data Cleaning, Agile, Model Deployment

ACHIEVEMENTS

- Awarded the **Gold Medal** for achieving a CGPA of 9.57/10 in B.Tech CSE.
- Secured **1st place** in NPCI Hackathon (Kaggle) with a 2-member team (score: 0.995; 100+ teams).
- Ranked in the **top 2%** in JEE Mains (All India) among 1.5M+ candidates. (2020)