

Challa Venkata Sai Girish

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SUMMARY

Computer Science graduate with hands-on experience building production-style systems across backend engineering, optimization, NLP, analytics, and computer vision. Proficient in Python, FastAPI, Flask, PostgreSQL, Docker, REST APIs, and CI/CD workflows. Developed and deployed multiple end-to-end applications with testing, cloud deployment, and technical documentation. Strong foundation in software engineering, databases, APIs, object-oriented programming, and problem-solving. Seeking an Associate Software Engineer role to contribute to scalable software solutions and continue growing as an engineer.

SKILLS

- Programming Languages:** Python (OOP), SQL, JavaScript, HTML
- Backend & APIs:** FastAPI, Flask, REST APIs, JWT Auth, RBAC, SocketIO, Gunicorn
- Databases:** PostgreSQL (Star Schema), MySQL, MongoDB
- Machine Learning & AI:** YOLOv5, scikit-learn, TF-IDF, LinearSVC, OR-Tools (CP-SAT, LNS), OpenCV, LSTM, Random Forest, NLTK, PyTorch
- DevOps & CI/CD:** Docker, GitHub Actions, Render, CI/CD
- Data Science & Tools:** Pandas, NumPy, Streamlit

PROJECTS

- GlobalScart 360 — Backend Commerce Engine**
- Production-style backend with multi-stage checkout lifecycle (ORDER_CREATED → PAYMENT_PENDING → SUCCESS/FAIL) using PostgreSQL transactions for atomic consistency
 - Implemented JWT-secured RBAC, row-level locking for inventory, and idempotency table for payment webhook retries
 - Built near real-time analytics pipeline with star-schema, incremental upserts, and request-ID tracing middleware
 - Fully containerized with Docker Compose; CI/CD via GitHub Actions with green checkmark on all pushes
 - • Deployed on Render with automated testing, release management, and GitHub Actions CI/CD workflows
- University Timetabling Solver — CP-SAT + LNS Optimizer**
- Hybrid CP-SAT + LNS optimizer that detects infeasible university timetables and auto-generates feasible schedules
 - Benchmarked against ITC-2019 standard instances; achieves Quality Score 100 on test cases with 150 classes and 7 rooms
 - Deployed FastAPI backend on Render with interactive GitHub Pages dashboard for live visualization
- Hate Speech Detection — NLP Classifier + AI Chatroom**
- TF-IDF + LinearSVC text classifier achieving 78.5% accuracy (Macro F1: 0.78) on 6,424 test samples
 - YouTube comment classifier detects toxic content with sentiment analysis and keyword highlighting
 - Real-time AI polite chatroom that auto-detects hate speech via SocketIO and converts messages to polite alternatives

EDUCATION

Anurag University	Hyderabad
B.Tech in Computer Science & Engineering	Sep 2023 - May 2026
• CGPA: 7.45	
Govt. Polytechnic Warangal	Warangal
Diploma in Electronics & Communication Engineering	Sep 2020 - May 2023
• CGPA: 7.19	

CERTIFICATIONS

- Software Engineering Job Simulation – Forage (2026)
- CCNA: Introduction to Networks: Cisco Networking Academy
- CCNA: Switching, Routing, and Wireless Essentials: Cisco Networking Academy
- Cybersecurity Virtual Internship – Palo Alto Networks & AICTE (2026)
- • Python Essentials 1 & 2 – Cisco Networking Academy (2023)

LANGUAGES

- English: Professional
- Telugu: Native
- Hindi: Professional

ACHIEVEMENTS

- • Built and deployed 5 production-style engineering projects across backend systems, optimization, NLP, analytics, and computer vision