

Summary

Computer Science undergraduate with a keen interest in Distributed Systems ,AI and System Design. Experienced in developing high-quality, scalable code with good test coverage for platforms ranging from GPU-accelerated applications to high-throughput data pipelines.Passionate about bridging novel AI research with real-world deployment through scalable data pipelines and intelligent systems.

Education

PES University, Bengaluru, India

B.Tech in Computer Science & Engineering

Relevant Coursework: OS, DSA, ML, Computer Networks, Heterogeneous Parallelism, Big Data , LLM

CGPA: 8.6/10.0

CNR Rao Merit Scholarship (Top 20%)

2022 – 2026

Technical Skills

Languages: Python, C++, C, Java

ML and Data Analytics: PyTorch, TensorFlow, scikit-learn , LLM

Systems & Pipelines: Kafka , Spark, Hadoop , CUDA

Tools & DevOps: Docker, Git, Google Cloud Run, Vercel

Key Projects

- Ray Tracing Optimization with Heterogeneous Parallelism (Tech: C++, CUDA, OpenMP, BVH)

 - Engineered a high-performance Ray Tracer in C++/CUDA, optimizing rendering speed by **17,000x** through the implementation of a Bounding Volume Hierarchy (BVH) structure.
 - Demonstrated expertise in heterogeneous parallel programming and performance tuning for critical system-level efficiency on CPU+GPU architectures.
- LoRaWAN Train Tracking & Collision Detection (Tech: Python, Kafka, Redis, Flink, PyTorch (LSTM))

 - A real-time telemetry and alerting pipeline using Kafka, Flink, and Redis with sub-800ms end-to-end latency, secured via X25519 key exchange and AES-GCM encryption. The fully integrated system is hosted for production grade reliability.
 - Developed an LSTM model in PyTorch for high-accuracy, low-latency collision detection and real-time network monitoring.
- Distributed Logging & Monitoring System (Tech: Kafka, Fluentd, Elasticsearch, Kibana, Docker)

 - Designed and deployed a scalable, high-throughput log aggregation pipeline using Kafka and ELK stack, ensuring system resilience under heavy workloads.
 - Ensured deployment readiness by containerizing the entire distributed architecture using Docker, simulating production environment.
- AI-Powered Placement Portal (IMCL 2025 Publication) (Tech: Go, React/TypeScript, PostgreSQL, Mistral LLM, Ollama)

 - Developed a full-stack tool-augmented agent system (Go/React) for holistic student evaluation, integrating data from GitHub, LeetCode, resumes, and mentor feedback.
 - Built the robust backend using Go (Gorilla Mux, GORM) and PostgreSQL, hosting a locally deployed Mistral LLM via Ollama for candidate scoring and chatbot queries.
- ClutterFlow: LLM-Powered Document Classification System (Tech: Python/FastAPI, React.js, Gemini LLM, Supabase, Docker)

 - Developed a full-stack platform using a FastAPI backend and React frontend to automatically classify and summarize unstructured notes.
 - Integrated an OCR pipeline with the Gemini LLM for topic classification and deployed services using Docker, Google Cloud Run, and Vercel.

Experience

- Teaching Assistant — Python Programming, PES University

Website Designer — Infobells

Designed and deployed a responsive website (WordPress + Hostinger), improving public visibility and user engagement.

Fall 2025

Jun – Aug 2024
- Mentored 60+ undergraduates, leading review sessions focused on debugging and algorithmic problem-solving.

Publications & Awards

- Research Publication (International Machine Learning Conference 2025): AI-Powered Placement Portal.
- Winner: InGenious 11.0 Hackathon – Disaster Management Robot (2023).

Extracurriculars

Core Member, Parallax GAME DEVELOPMENT AR/VR Club (Game Development and Graphics)