

HESHINTH P

AI & Data Science Undergrad | Python Backend Developer

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EDUCATION

Meenakshi Sundararajan Engineering College
Bachelor of Technology in Artificial Intelligence & Data Science (GPA: 8.11)

Nov 2022 – April 2026
Chennai, IN

SKILLS

- **Programming Languages:** Python, JavaScript, SQL
- **AI & Data Science:** LLM APIs, RAG Systems, Vector Databases, Fastembed, Pandas, NumPy
- **Web Development:** FastAPI, PostgreSQL, Firebase, Vue.js, REST APIs
- **Developer Tools & CI/CD:** Git, Docker, GitHub Actions (CI/CD), Google Cloud Platform, Postman, Linux

EXPERIENCE

Software Engineering Intern
Brightsun Steel Fabrication

Aug 2025 – Nov 2025
Coimbatore, IN

- Developed a web-based inventory system using Nuxt.js with Firebase backend for efficient stock tracking.
- Improved operational efficiency by providing a user-friendly interface for stock management in the steel industry.

Web Development Intern
Meenakshi Sundararajan Engineering College

June 2024 – Oct 2024
Chennai, IN

- Built a staff assessment app using Nuxt.js and Firebase as the backend to collect and manage faculty feedback.
- Developed a real-time analytics dashboard enabling administrators to instantly visualize feedback and generate reports.

PROJECTS

RAG Query System - FastAPI backend for document QA

- **Technologies:** Python, FastAPI, Docker, PostgreSQL, Pinecone, Google Gemini
- **Achievement:** Selected as Top 35 Finalist out of 46,000+ participants in the Bajaj Finserv HackRx 6.0; secured 8th place in the Grand Finale.
- Engineered a scalable containerized backend for a Retrieval-Augmented Generation system using FastAPI and Docker.
- Implemented a multi-step query pipeline with hybrid search and re-ranking, integrating Pinecone and Google Gemini to enhance response accuracy.

LocalEmbed - OpenAI-Compatible Local Text Embedding API

- **Technologies:** Python, FastAPI, Docker, Fastembed, GitHub Actions
- Engineered a containerized microservice generating text embeddings locally as a drop-in OpenAI API replacement.
- Developed an in-memory model cache to keep frequently used embedding models loaded in memory and reduce latency.
- Set up a GitHub Actions workflow to automate the building, and publishing of Docker images directly to Docker Hub.

CMRL Passenger Data Scraper

- **Technologies:** Python, Requests, Pandas, GitHub Actions
- Developed and automated a web scraper using GitHub Actions to continuously collect and process passenger data from the Chennai Metro Rail (CMRL) portal.
- Processed and structured the collected data into a usable dataset, enabling analysis that identified peak travel hours and most frequented station routes.

LEADERSHIP & ACTIVITIES

Secretary, AI Club
Meenakshi Sundararajan Engineering College

Oct 2024 – Aug 2025

- Organized workshops & hackathons, consistently attracting over 100 participants per event.
- Facilitated project development and skill-building for club members.

Placement Coordinator, AI&DS Department
Meenakshi Sundararajan Engineering College

Sep 2025 – March 2026

- Coordinated placement activities and recruiter communication for a batch of 65 students.
- Organized pre-placement sessions, guided peers on interview prep, and supported departmental placement logistics.

Mentor & Organizer, Hackintym '25
MSIIC Clubs

Apr 2025 – Sep 2025

- Co-organized two editions of a 30-hour hackathon, coordinating logistics for over 100 participants per event.
- Contributed to defining and providing problem statements for participating teams.