

# Tanya Chaturvedi

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## TECHNICAL SKILLS

**Languages:** C++, Python, Go, JavaScript.

**Web Technologies:** HTML, CSS, React.js

**Databases:** MySQL, MongoDB, PostgreSQL, Redis.

**Tools:** Git, Docker, Power BI, GitHub Actions, Kafka

**AI/ML:** Machine Learning, Deep Learning, Neural Networks, LangChain, scikit-learn, pandas

## CERTIFICATES

- Oracle Cloud Infrastructure Generative AI Professional
- Neural Networks and Deep Learning – DeepLearning.AI

## PROJECTS

### Swaasthya | *Go, Kafka, Redis, PostgreSQL, Docker, Kubernetes*

Grand Finalist SIH'24

- Engineered a scalable microservice-based hospital system with region-based DB sharding.
- Implemented robust two-factor authentication; curtailed unauthorized access incidents by 70%.
- Streamlined patient flow using Redis-powered intelligent queuing, decreasing average wait times by 25%.
- Orchestrated Kafka-driven event pipelines for real-time asynchronous processing across distributed nodes.

### Promptly | *FastAPI, React, scikit-learn, Hugging Face*

- Spearheaded development of a AI chatbot enabling real-time user interaction using React (Vite) frontend and FastAPI backend, cutting manual content creation time by 75%.
- Trained and deployed custom intent and sentiment classifiers using scikit-learn and transformers, demonstrating complete ML pipeline skills (data preprocessing, training, evaluation, serialization).
- Implemented a Retrieval-Augmented Generation (RAG) module with FAISS and SentenceTransformers for context-aware responses.

### KnowBERT | *Python, scikit-learn, SentenceTransformers, FastAPI*

- Built a hybrid recommendation system integrating content-based and collaborative filtering to deliver personalized product suggestions.
- Executed unsupervised user segmentation using K-Means clustering to identify purchasing patterns and optimize recommendations.
- Applied BERT-based embeddings via SentenceTransformers to capture semantic similarity between product descriptions and Conducted hyperparameter tuning for clustering and hybrid weighting to improve personalization metrics by 15%.

## ACHIEVEMENTS

- **Smart India Hackathon 2024:** Finalist (Top 5 teams) out of 300+ submissions at VIT Bhopal.
- **LeetCode:** Contest rating 1672, Top 12.4% out of 600K+ users.
- **GeeksForGeeks:** Global Rank 7,887, rating 1553 among 200k+ users.

## EXTRACURRICULAR ACTIVITIES

**Joint Secretary, BashCraft:** Spearheaded 4+ technical events, including podcast with a Senior Staff member at Google, boosting student participation by 40% through engaging hackathons.

**Technical Team Member, IOT club:** Executed 3+ large-scale IoT-based campus initiatives involving hardware-software convergence.

**District level Gymnastics Silver Medalist** Secured 2nd place among 30+ athletes at Hyderabad.

## EDUCATION

### Vellore Institute of Technology

B.Tech in Electronics and Communication, with AI and Cybernetics – 8.23 CGPA

October 2022 – July 2026

### Christ Church Girl's S.S. School

Class XII

Apr 2020 – May 2021

### Christ Church Girl's S.S. School

Class X

Apr 2018 – May 2019