

VISHESH SHEKHAWAT

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Education

M.Tech in Artificial Intelligence (Generative AI)
NIT Jalandhar

Aug 2025 – Present
CGPA: 8.51/10

Projects

Modular Adaptive Network OS (manOS)

FastAPI, PostgreSQL, FAISS, RAG, PyTorch

- Developed an AI-powered adaptive learning system that converts documents into retrieval-grounded flashcards and automatically schedules revisions using spaced repetition
- Built an end-to-end RAG pipeline from document ingestion and semantic chunking to embedding generation, vector retrieval, and LLM-powered content creation
- Designed agentic workflows for flashcard generation, revision planning, and personalized learning recommendations
- Engineered FastAPI APIs and FAISS-based retrieval systems enabling scalable knowledge search and context-aware content generation
- Implemented evaluation frameworks to improve retrieval quality, generation accuracy, and learning effectiveness

Prospera.ai - Financial Intelligence & Portfolio Recommendation System

LangGraph, FastAPI, FAISS

- Built an end-to-end multi-agent financial intelligence platform that analyzes real-time news, macroeconomic events, and portfolio holdings to generate explainable investment recommendations
- Developed LLM-powered event extraction and reasoning agents capable of identifying market-moving events including geopolitical conflicts, policy changes, earnings reports, and sector-specific developments
- Designed a retrieval-augmented financial knowledge system using historical market events, financial literature, and vector search to support evidence-based reasoning and reduce hallucinations
- Engineered hybrid forecasting pipelines combining event-driven intelligence with machine learning and time-series models to predict returns across multiple investment horizons
- Implemented portfolio optimization, risk analytics, recommendation generation, and virtual trading simulation modules for performance evaluation against benchmark strategies

Hackathons & Competitions

StatHack – Skin Disease Classification (IIT Goa)

Computer Vision, EfficientNet

- Improved classification accuracy from **76.0% to 85.4%** using EfficientNet, image augmentation, and optimized preprocessing pipelines
- Achieved **6th Rank** on the Kaggle leaderboard by developing robust medical image classification workflows

Heart Disease Prediction – ML Competition

Machine Learning, Ensemble Learning

- Improved ROC-AUC from **0.9448 to 0.9539** on 600k+ patient records using feature engineering, model stacking, and ensemble optimization
- Ranked **238/4370 (Top 5.4%)** by combining XGBoost, neural networks, and classical ML models for high-performance risk prediction

Achievements

- **Ranked 78** on TensorTonic and **Ranked 202** on Deep-ML Platform.
- Solved **300+ DSA problems** on LeetCode.
- Qualified **GATE 2024 & GATE 2025**.

Skills & Interests

Programming: Python, C/C++, SQL

AI/ML: Machine Learning, Deep Learning, NLP, Generative AI, LLMs, RAG, Prompt Engineering, Agentic AI

Frameworks & Libraries: PyTorch, Scikit-learn, NumPy, Pandas, LangGraph

Databases & Retrieval: PostgreSQL, FAISS, Vector Search

Deployment & APIs: FastAPI, REST APIs, Backend Development