

# Ayush Singh

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## Summary

GenAI / AI-ML Engineer specializing in **RAG pipelines, LLM applications, LangChain/LangGraph workflows, and AI Agents**. Built **production-style RAG systems**, OCR-based verification automation, and transfer learning models using **Python, vector databases, FastAPI, and Docker**. Hackathon winner (Top 10/1000 teams) with strong problem-solving background (1000+ DSA problems solved).

## Education

Parul University, B.Tech in Computer Science

2022 – 2026

## Experience

Capgemini, Pre-Joining Technical Training Program

Jan 2026 – Present

- Selected through campus recruitment and received an **Offer of Intent (LOI)**.
- Currently undergoing structured pre-joining training in **DSA, OOP, debugging, and coding best practices**.
- Solving company-style coding assignments with focus on **edge cases and time complexity**.

## Skills

**Languages :** Java, C++, Python

**GenAI:** RAG, LangChain, LangGraph, Embeddings, Prompt Engineering

**Machine Learning:** Supervised Learning, Feature Engineering, Model Evaluation

**Backend/Deployment :** FastAPI, REST APIs, Docker, Streamlit

**Databases:** Vector Databases (FAISS/Chroma), SQL (MySQL)

**Deep Learning:** CNN, Transfer Learning, PyTorch

## Projects

**Local Vendor Automation - AI/ML Developer (Hackathon Top 10/1000, ₹5000 Prize)**

[Github](#)

**Tech Stack:** Python, LangChain, Gemini API, Ollama, EasyOCR, Transfer Learning, RAG

- Built an AI onboarding automation system with **OCR PAN verification** and fraud checks..
- Developed **transfer learning image classifier** for auto product categorization..
- Built a FastAPI backend to connect OCR + classifier + RAG chatbot into one integrated workflow.
- Implemented RAG chatbot + safety filtering layer for grounded FAQ responses.

**AI Blog Writing Agent - LangGraph Multi-Agent + RAG System (Feb 2026 – Present)**

[Github](#)

**Tech Stack:** Python, LangGraph, LangChain, RAG, Embeddings, Vector DB, Pydantic, Streamlit

- Built a planning-first **multi-agent blog writing system** using LangGraph orchestration.
- Integrated **RAG pipeline** (chunking, embeddings, retrieval) for grounded research-based blog generation
- Implemented router-based workflow and structured outputs using Pydantic schemas.
- Deployed Streamlit UI for an end-to-end production-style demo (working)

## ACHIEVEMENTS

- PU Code Hackathon 3.0: **Top 5 out of 1000 teams**, awarded **₹5000 prize**
- Competitive Programming: **GeeksforGeeks 3-Star, CodeChef 2-Star**
- Rankings **Top 0.5%** in University in GFG and Codilio
- Solved **1000+ DSA problems** across LeetCode, GFG, CodeChef, Codeforces
- Google Developer Student Clubs (GDSC): **Core Member (Competitive Programming Team)**