Pratham Khanna

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GitHub Link: GitHub
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Portfolio Link: Portfolio

ACADEMIC DETAILS

B.Tech. (Computer Science and Engineering)	2022-2026	MMMUT, Gorakhpur	8.32/10.0
Class XII (C.B.S.E.)	2022	H.A.L. Vidyalaya, Kanpur	96.2% (School Topper)
Class X (I.C.S.E.)	2020	Methodist High School, Kanpur	95.0%

INTERNSHIP/EXPERIENCE

Associate AI Engineer   **MetaUpSpace LLP**   *September, 2025 – Ongoing*

- **ConvoSynth.AI (Multi-Agent Presentation Generator)**
  - Built an enterprise **multi-agent ConvoSynth AI Engine** using sequential pipelines with **Graph RAG** and agentic RAG to convert user inputs into complete HTML presentations.
  - Designed and optimized 10+ specialized agents with **sub-2s latency** and **<15s total generation** for 8–10 slide outputs.
  - Implemented document processing with **RAG-Anything**, metadata filters, RBAC, and 95%+ accuracy on financial documents.
  - **Technologies Used**: **Python, FastAPI, LangChain, LightRAG, multi-LLM orchestration, RAG-Anything, and related AI tooling.**

Summer Intern (View Certificate)   **Hindustan Aeronautics Limited (H.A.L)**   *June, 2025 – July, 2025*

- **RogiMitra.AI (Automated Medical Diagnostics and Prescription System)**
  - **Project Link:** (Repository Link) (Deployed Link) (Live Demo Link)
  - An **end-to-end, Agentic-AI** powered medical web app enabling users to submit symptoms and receive **AI-assisted diagnostic reports**.
  - Implemented a **multi-agent system** using **CrewAI** and **DeepSeek LLM** to process symptoms, medications, and lab data **asynchronously**.
  - Developed an **interactive** doctor dashboard enabling **100% review control**, and feedback integration before prescription generation.
  - Automated PDF report creation and integrated **secure cloud storage** with Cloudinary for easy access and **1-click** download.
  - **Technologies Used**: **Python, Streamlit, MongoDB Atlas, Cloudinary, CrewAI, DeepSeek LLM, PDF generation (FPDF), Tavily.**

AI and Analytics Intern   **Beautiful Planet.AI**   *January, 2025 – June, 2025*

- **Lawyer Assistance Workflow (Multi AI agent team + Retrieval Augmented Generation)**
  - Developed an **Agentic-AI** pipeline using **LangChain**, **CrewAI**, and **RAG** to automate **end-to-end** legal case preparation, from document input to draft generation.
  - Extracted structured text from scanned PDFs using **OCR**, enabling **digitization of legacy law documents**, across varied scan quality.
  - Integrated **vector db (ChromaDB)** for efficient **semantic search** and **retrieval** of legal codes, case references and precedent judgements.
  - Integrated **DeepSeek R1** model via **OpenAI**-compatible, **LiteLLM** interface to enable cost-efficient, high-performance inference.
  - **Technologies Used**: **Python, LangChain, CrewAI, DeepSeek LLM, ChromaDB, RAG, LiteLLM, LMStudio.**

PROJECT(s)

Comp-Intell (Agentic AI Competitor Intelligence Team)
- **Project Link:** (Repository Link) (Deployed Link)
- Built an **AI-powered** system to help businesses analyze up to **5 competitors** per input by **scraping web content** and **processing internal company files** using LLMs and RAG.
- Integrated **DeepSeek LLM** to generate **market strategy** and **SWOT** analysis, improving output relevance by **30%** when internal documents were included.
- Used **Firecrawl** to extract structured data from competitor websites and **Exa AI** to discover relevant competitor URLs based on company URL or description, reducing manual research time by **>80%.**
- Implemented **Retrieval-Augmented Generation** (RAG) using **LangChain**, **FAISS**, and **HuggingFace embeddings** to deeply analyze company's internal files (PDF, DOCX, TXT).
- Tested on **10+ real-world** companies across domains (eco-lighting, SaaS), consistently delivering actionable intelligence with **>90%** user-rated usefulness.
- **Technologies Used**: **Python, Streamlit, Firecrawl API, Exa API, LangChain, FAISS, DEEPSEEK LLM, HuggingFace Embeddings.**

ACHIEVEMENTS

- NPTEL **Introduction to Machine Learning** course (2025) top **1% topper** among 13644 candidates. (View Credential)
- Smart India Hackathon 2023. (View Credential)
- Solved 150+ D.S.A. problems on Geeks for Geeks. (View Profile)
- 5-star (Java) coding badge at Hacker Rank. (View Profile)

SKILLS

Technical: Python, Java, n8n, LangChain, Graph RAG, LangFlow, LangGraph, LlamaIndex, LangSmith, CrewAI, SciKit-Learn, TensorFlow, PyTorch, Keras, MySQL, MongoDB, Git, GitHub.

Curriculum: Data Structures and Algorithms, Machine Learning, Object Oriented Programming, Software Engineering.

Certificates: Machine Learning Specialization | Generative AI with Large Language Models | LangChain for LLM Application Development | LangChain Chat with Your Data | Multi AI Agent Systems with CrewAI | Practical Multi AI Agents and Advanced Use Cases with CrewAI | I.I.T. Madras B.S. degree Foundational Level.

Interests: ML, NLP, Agentic AI, Image Processing, Speech Recognition, AI Automation, Retrieval Augmented Generation, LLMs, MCP servers.

Soft Skills: Problem solving approach, Hardcore Learner, avoid repeating mistakes, Analytical Thinking, Result Oriented, Flexibility, Trustworthiness, Honesty, Integrity, Ability to work in team environment.

POSITION(s) OF RESPONSIBILITY

- **AI/ML Head** at Computer Engineering Society, MMMUT   *May 2025 - Ongoing*
- **Executive Board Member** at Computer Engineering Society, MMMUT   *June 2023 – May 2025*