Abhishek Chourasia

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Portfolio | LinkedIn | GitHub

Professional Summary

A B.Tech. Computer Science graduate from Medi-Caps University (9.33 CGPA) specializing in AI, Machine Learning, and Full-Stack Development. My experience is defined by engineering end-to-end AI systems, from developing multi-agent chatbots (A-Prime.ai) and agentic systems (SuperGPT) at Supersourcing to creating a breast cancer detection tool (Web-BCD) under IBM's mentorship. As a published researcher, my work includes an IEEE paper on the "KrishiDisha" AI platform for agriculture and a Springer Nature paper on student dropout analysis. I am proficient in Python, LangChain, and FLask, with hands-on experience using FastAPI, MongoDB, and Docker to build and deploy robust solutions.

Technical Skills

Languages & Databases: Python, Java, C/C++, JavaScript, HTML/CSS, SQL, MongoDB, PostgreSQL

Frameworks & Tools: LangChain, LangGraph, FastAPI, Flask, Django, Scikit-learn, TensorFlow, Pandas, NumPy, Git, Docker

Core Competencies: Machine Learning, Deep Learning (CNN, RNN-LSTM), LLMs, Full Stack Web Development, Data Analysis, Research & Development

Experience

Supersourcing *July 2025 – Present*
Indore, India *AI/ML Intern*

- Enhanced the **SuperGPT** enterprise chatbot by engineering two new AI agents for role-based dashboard access and team performance queries, expanding its capabilities from 4 to 6 core functions.
- Architected and implemented a multi-agent framework using **Langchain** and **Langraph**, enabling a single user query to be processed by multiple specialized agents simultaneously.
- Contributed to the development of AI solutions for partner products, including data curation for **getprojects.ai** using **PostgreSQL** and foundational analysis for an e-learning chatbot (**Shule Direct**).
- Utilized **FastAPI** to build and expose robust API endpoints for chatbot functionalities, ensuring seamless integration and communication between agents and the frontend.

IBM Global Remote Mentorship *July 2024 – December 2024*
Pune, India (Remote) *Machine Learning Research Intern*

- Developed **Web-BCD**, a breast cancer detection system using the Wisconsin dataset, achieving high accuracy.
- Engineered an ML model with Python (Pandas, Numpy, Scikit-learn) and a Sequential Neural Network.
- Deployed the model using Flask and integrated it with an interactive HTML/CSS/JavaScript interface.
- Earned an IBM SkillsBuild certificate and received mentorship from an industry expert, enhancing technical and project management skills.

Education

Medi-Caps University *August 2023 – May 2025*
Indore, India *B.Tech in Computer Science, CGPA: 9.33*

Medi-Caps University *June 2021 – July 2023*
Indore, India *B.Sc in Computer Science (AIML), CGPA: 8.88*

Karnataka Vidya Niketan School *2021*
Indore, India *MPBSE, 12th Standard – 86.2%*

Karnataka Vidya Niketan School *2019*
Indore, India *MPBSE, 10th Standard – 85.4%*

Projects

A-Prime-AI | **Multi-Agent Chatbot Platform** *May 2025 – Present*

- Developing **A-Prime-AI**, a multi-agent chatbot platform using Python with a robust FastAPI backend.
- Engineered an intelligent routing system using a Groq-powered LLM (Llama 3) to delegate tasks to specialized agents for web search, image generation, code creation, and Q&A.
- Integrated external APIs: **Tavily** for web searches, **Stability AI** for image generation, and **Groq** for high-speed language processing.
- Implemented a persistent, long-term memory system using **MongoDB** to store and retrieve user chat sessions and conversation histories.

SuperGPT | **Enterprise AI Agent Enhancement** *July 2025 – Present*

- Engineered a role-based access control (RBAC) agent to govern chatbot interactions with dashboards, ensuring users could not access data beyond their authorized permissions.
- Developed a conversational agent for team dashboards, allowing managers to query team member performance metrics and delegation structures using natural language.
- Upgraded the chatbot's core logic to support multi-agent workflows, designing a system where complex queries are decomposed and routed to multiple agents for a comprehensive response.
- **Tech Stack**: Python, Langchain, Langraph, FastAPI, Large Language Models (LLMs).

KrishiDisha | **AI-driven Crop Optimization Platform** *October 2024 – April 2025*

- Integrated crop/fertilizer recommendations, disease detection, and yield prediction using ML models (Random Forest, CNN).
- Developed an AI-powered chatbot for instant, personalized agricultural guidance and implemented multilingual support.
- Deployed the platform using Flask with a user-friendly interface to improve accessibility for farmers.
- Authored paper titled "KrishiDisha: Revolutionizing Agriculture with Intelligent Recommendations, Disease Detection, and Yield Prediction " accepted for the *2025 International Conference on Engineering Innovations and Technologies (ICoEIT)*.

STUDROP | **Student Dropout Analysis using ML/DL** *October 2023 – January 2024*

- Co-authored and presented a paper at WCSC 2024 analyzing factors influencing student dropout using ML and DL algorithms.
- Published by **Springer Nature** in the *Studies in Smart Technologies* series (April 2025). DOI: 10.1007/978-981-97-9006-7_20.

Certifications

Celonis: Academic Process Mining Fundamentals *July 2024*

IBM: Data Science & Machine Learning with Python *July 2024 & July 2023*

NPTEL IIT Madras: Python for Data Science *April 2024*

Cisco: Python Essentials, Networking Essentials, OS Basics *April 2023*

Awards

CodeVir (All India Rank: 17) | **iNurture Education Solutions** *January 2023*

Runner-Up (Silver Medalist) - National Transtemporal Tattle Trials *January 2022*