

Parth Saxena

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EDUCATION

Vellore Institute of Technology, Bhopal

Integrated M.Tech in Artificial Intelligence (CGPA: 8.34)

Apr 2022 – Present

Bhopal, Madhya Pradesh

TECHNICAL SKILLS

Languages: Python, SQL

Frameworks: NumPy, Pandas, Scikit-learn, Keras, TensorFlow, NLTK, LangChain, LangGraph

AI Systems & Architectures: RAG, Agentic AI Systems, Vector Search Pipelines

Tools & Others: Git, GitHub, AWS, OpenCV, LangFlow

EXPERIENCE

Vellicate Technologies Pvt. Ltd.

May 2025 – Dec 2025

Software Development & AI Intern (On-site)

Bangalore, India

- Built a scalable Agentic AI system using LangChain, Gemini API, and FAISS to autonomously retrieve, reason, and respond to complex queries, delivering 98% retrieval accuracy and reducing user resolution time by 70%.
- Designed and implemented a scalable community management platform with structured backend pipelines and an NLP-powered chatbot, enabling events, announcements, and query handling for 1,000+ active users.
- Implemented end-to-end e-commerce functionality (Razorpay integration with 99%+ payment reliability) and enhanced the LMS using AI tools (ElevenLabs) to support multilingual audio, subtitles, video enhancement, and noise reduction.

Rekniq Consultants

Jan 2025 – Mar 2025

Web Development Intern

Bhubaneswar, India

- Developed and deployed production web services with a focus on backend logic, API performance, and scalable request handling.
- Improved application responsiveness and load performance through code optimization and efficient data handling strategies.
- Collaborated with clients to translate system requirements into reliable software solutions.

PROJECTS

PaperMind: AI Research Assistant | Python, RAG, LangChain, Gemini API, FAISS, Streamlit

Jan 2026

- Architected and deployed a production-grade Retrieval-Augmented Generation (RAG) system using LangChain and Gemini 2.5, reducing research analysis time by 70% through automated knowledge extraction.
- Engineered FAISS vector search pipelines for semantic retrieval, achieving 98% accuracy on 25+ research papers.
- Optimized embedding pipelines by leveraging RecursiveCharacterTextSplitter and custom batch processing with exponential backoff, reducing embedding latency by 45% and ensuring 100% reliability against API rate limits.
- Developed a Streamlit interface with persistent session memory and a Hybrid Search Strategy, enhancing research workflow efficiency by 50%.

Anemia Detection using Conjunctiva Images | Python, ML, OpenCV, TensorFlow, Keras

Feb 2025

- Achieved 93% accuracy in predicting anemia disease using CNN and 95% post-scaling with Random Forest Classifier.
- Gathered a comprehensive dataset of conjunctiva images containing 4,262 images across both anemic and non-anemic classes, ensuring data quality and integrity through preprocessing steps.
- Employed Random Forests for classification, leveraging extracted features of CNN to accurately identify anemic conditions from images.
- Secured a 96% recall rate for anemia detection using Random Forest, demonstrating robust algorithmic implementation.

ACHIEVEMENTS & EXTRACURRICULAR ACTIVITIES

- Published a research paper on AI-powered anemia detection using CNN and Random Forest, emphasizing model optimization and real-world deployment considerations in TANZ Journal (Scopus & UGC Approved), Vol. 20, Issue 08, 2025.
- Led my team to the Semi-finals of the Bharat GenAI Challenge, organized IIT Bombay.
- Leadership: Drove PR and secured sponsorships across 2 student clubs, leading 10+ successful events.
- Completed *Applied Machine Learning in Python* (University of Michigan, Coursera).
- Completed *Cloud Computing* (IIT Kharagpur, NPTEL).