

SHIVAM KUMAR YADAV

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PROFESSIONAL SUMMARY

Computer Science graduate with applied experience building end-to-end Generative AI systems including multi-agent frameworks, Retrieval-Augmented Generation pipelines, and multimodal applications. Developed production-ready solutions using LangChain, LangGraph, and vector databases. Completed Google x Kaggle AI Agents Intensive Capstone. Certified by ISRO and Ernst & Young in AI/ML. Seeking Generative AI Engineer roles requiring hands-on LLM orchestration, document intelligence, and systematic problem-solving.

PROJECTS

ATLAS - Autonomous Multi-Agent Research Framework | Google x Kaggle Capstone ([GitHub Link](#))

Built a multi-agent system to automate research workflows, reducing manual effort by ~60% for tasks requiring web search and information synthesis.

- Designed a state-driven orchestration layer using LangGraph to coordinate Planner, Search, and Synthesizer agents through conditional routing.
- Identified sequential search as a bottleneck and implemented parallel execution, improving end-to-end latency by ~35%.
- Tested across 20+ research queries in technical, legal, and market domains, producing structured reports with source citations.

ASKMYDOCS - RAG System for Document Intelligence ([GitHub Link](#))

Developed a retrieval-augmented generation system for Q&A over private document collections without model fine-tuning.

- Built document processing pipeline: PDF ingestion → text chunking → vector embeddings → semantic retrieval.
- Experimented with chunking strategies (fixed: 500/1000/1500 tokens vs semantic splitting) to balance context quality and query speed.
- Reduced hallucination rate by ~40% through prompt engineering and temperature adjustment (0.3 vs 0.7).
- Achieved 2-5s response time on 15+ document sets (legal contracts, technical manuals, research papers) using consumer hardware.

GEMINI VISION ANALYZER - Multimodal AI Application ([GitHub Link](#))

Created an OCR application to extract structured data from medical prescriptions and pharmaceutical labels for pharmacy workflows.

- Developed a vision-based extraction pipeline for high-variability medical documents where template matching fails.
- Iteratively tested image preprocessing and prompting approaches, improving handwritten text recognition by ~15%.
- Validated on 100+ annotated images: ~95% accuracy on printed text, ~88% on handwritten samples.

LEADERSHIP EXPERIENCE

NSS Unit - Commanding Officer | Chouksey Engineering College | 2024 – 2025

Led 100+ volunteers in organizing community service initiatives across the college.

- Coordinated 4 one-day camps and 1 seven-day residential camp, managing logistics, volunteer assignments, and event execution.
- Developed leadership and communication skills through cross-functional team management and stakeholder coordination.

TECHNICAL SKILLS

Generative AI & LLMs: LangChain, LangGraph, RAG Systems, Prompt Engineering, LLaMA-3, OpenAI GPT, Google Gemini, Multi-Agent Orchestration

Machine Learning & Deep Learning: PyTorch, TensorFlow, Scikit-learn, XGBoost, Neural Networks(ANN, CNN, RNN), Hugging Face Transformers

NLP & Text Processing: SpaCy, NLTK, Semantic Search, Text Classification, Document Parsing

Data Science & Engineering: Python, SQL, Pandas, NumPy, ChromaDB (Vector DB)

Cloud, Deployment & MLOps: Microsoft Azure, CI/CD, Streamlit, Gradio, GitHub Actions, n8n Workflows

EDUCATION

Bachelor of Technology (B.Tech) - Computer Science

Chouksey Engineering College, Bilaspur | Graduated: 2025

CERTIFICATIONS

- Google x Kaggle AI Agents Intensive Capstone
- AI/ML for Geodata Analysis – ISRO (IIRS)
- AI Skills Passport - Ernst & Young (EY) in partnership with Microsoft
- Data Science & Generative AI Professional - Oracle AIML
- Machine Learning Fundamentals – IBM