

# Abhay Singh Sengar

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## Work Experience

### GenAI Intern – Smart Bridge

Nov 2025 – Jan 2026 | Remote

- Developed and deployed LLM-powered generative AI applications using Google Cloud Platform services including Vertex AI, Cloud Functions, and AI Platform, enabling scalable deployment and inference for text generation and conversational AI systems.
- Built end-to-end Machine Learning pipelines integrating models (Model Integration) with LangChain, OpenAI APIs, and GCP infrastructure, performing data preprocessing and orchestrating the pipeline flow (Pipeline Orchestration) to deliver production-ready conversational AI systems and content-generation tools.
- Implemented Retrieval-Augmented Generation (RAG) systems using vector databases and GCP managed services, optimizing response accuracy and reducing latency by 35%.
- Demonstrated strong collaboration by working with cross-functional teams to support data preparation, model fine-tuning, prompt engineering, and data engineering concepts for generative AI applications.

## Projects

### Manga Narrator

Nov 2025

- Developed a Chrome extension leveraging GPT-4 Vision API to automatically extract and narrate manga dialogue with 6 distinct AI voices based on character gender and emotions.
- Created real-time screen capture and intelligent panel detection system supporting right-to-left reading order.
- Implemented emotion detection algorithms adjusting speech characteristics across 5 emotional states for natural narration.
- Built settings management with API key configuration, adjustable speech rates, and capture intervals reducing API costs by 40%.

### Xtractor

Jun 2025

- Developed a multi-agent Retrieval-Augmented Generation (RAG) system analyzing entire YouTube channels.
- Automated video content search, topic extraction, and summarization pipelines, reducing manual research time by 90%.
- Engineered content synthesis and blog-generation workflows integrating context-aware agents for scalable content creation.

### Codpal

May 2025

- Designed and deployed an AI-powered coding assistant integrating Ollama LLMs with hosted Gradio interface.
- Implemented real-time code correction, intelligent suggestions, and guided learning features for beginner programmers.
- Reduced debugging time by 40% and improved code learning efficiency.

## Education

### VIT Bhopal University – Kothri Kalan, India

Jul 2026

Bachelor's of Technology (Computer Science)

CGPA - 7.71

## Certifications

Meta HackerCup 2025 Finalist (AI Track) – Meta

MongoDB Administrator – FacePrep

Data Science/Analytic 3 month mentorship – PreGrad

Generative AI Course With Langchain and Huggingface – Udemy

Computer Vision Deep Learning: OpenCV, YOLO, ResNet – Udemy

## Skills

**Languages:** Python, Cypher Query Language, SQL, C++

**Developer Tools:** VS Code, Trae, WindSurf

**Technologies/Frameworks:** GitHub, streamlit, Langchain, MongoDB, Neo4j, AstraDB, Huggingface, OpenAI, Ollama, GroqLPU, CrewAI, OpenCV, Scikit-learn, Tensorflow, Keras, pandas, matplotlib, numpy

