

VIDYA DHAGE

Generative AI Developer

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SUMMARY

Generative AI Engineer skilled in building production-grade Agentic AI platforms, multi-agent systems, LLM-powered document intelligence pipelines, and hybrid RAG architectures. Experienced in NLP, OCR, and secure AI solutions and cloud deployment across Azure, and GCP consistently delivering scalable, real-world AI systems that replace legacy infrastructure with intelligent, automated solutions.

EDUCATION

B.E. Artificial Intelligence and Data Science | CGPA: 7.93

Aug 2021 – Jun 2025

K.K Wagh Institute of Engineering Education and Research

Higher Secondary Certificate (HSC) | Percentage: 91.5%

Jun 2019 – Jun 2021

Matoshree Junior College

WORK EXPERIENCE

Generative AI Developer

June 2025 – Present

Combat Solution AI

- Developed and deployed Agentic AI and multi-agent systems using LangChain, LangGraph (ReAct, Plan-and-Execute, Reflex, Deep Agents), along with a custom MCP (Model Context Protocol) Server-Client architecture for autonomous task planning, agent orchestration, and inter-agent communication.
- Built scalable AI-powered applications and APIs using Flask and Python by integrating LLMs, external tools.
- Built high-throughput OCR document processing pipeline with Celery worker replicas, Redis task queue, PostgreSQL, and Google Document AI.
- Designed and implemented Retrieval-Augmented Generation (RAG) pipelines with custom knowledge bases, semantic search, and vector databases using FAISS, Elasticsearch, and web-scraped data sources, fused with Qdrant vector search + Neo4j Knowledge Graph, LLM-based guardrails, and session management.
- Engineered hybrid AI search system combining Elasticsearch vector search + Neo4j Knowledge Graph re-ranking, replacing legacy keyword search and improving retrieval accuracy via intent detection and industry-code pre-filtering.
- Built face recognition & fraud/anomaly detection microservices with Elasticsearch biometric indexing and Docker health checks.

Database Developer

Dec 2023 – Jan 2024

System 24X7 (Remote)

- Developed and optimized database solutions using MySQL and SQL Server, including query development, database integration, and schema design to ensure efficient data management and application performance.
- Integrated the **HereMap API** to support location-based functionalities and geospatial data processing while maintaining data accuracy and seamless system connectivity.
- Implemented database security practices, performed performance tuning, and collaborated with cross-functional teams to deliver reliable, scalable, and secure database-driven applications.

PROJECTS

Bot Builder (No-Code Agentic AI SaaS Platform)

- Developed the backend for a no-code AI agent platform using LangGraph state machines and MCP Server-Client architecture, enabling dynamic agent orchestration, workflow execution, tool invocation, and knowledge base management.
- Implemented RAG using Qdrant, integrated third-party services (Gmail, HubSpot, Google Maps, WhatsApp), and automated containerized deployments with GitHub Actions CI/CD.

DCS Centum to PI Vision Transformation

- Developed XAML parsing, layout extraction, and data preprocessing pipelines to extract symbols, equipment hierarchies, coordinates, metadata, bindings, and control-system relationships, creating paired training datasets and transformation rules for supervised learning and LLM fine-tuning of DCS Centum to PI Vision symbol conversion.
- Built an AI-powered symbol transformation pipeline using Python, Azure AI, LLMs, and human-in-the-loop feedback, implementing continuous retraining, validated symbol mapping, semantic layout preservation, and automated replacement of incorrect DCS Centum symbols with PI Vision equivalents to improve transformation accuracy.

APA (Insurance Claims AI Platform)

- Built end-to-end insurance claims processing system with OCR pipeline (Google Document AI, Tesseract OCR), face recognition, and fraud/anomaly detection microservices deployed on Kubernetes with HPA autoscaling, PSI drift detection CronJobs, and automated model retraining.
- Architected distributed microservices infrastructure (API Gateway + independent fraud, anomaly, face, OCR services) using Celery, Redis, PostgreSQL, Elasticsearch biometric indexing, and Docker.

TOT (Tenders Extraction Pipeline)

- Built intelligent extraction pipelines that parse chemical compound names from scientific research documents and tender metadata from ODF images and mixed-format files (PDF, DOCX, scanned images) using Google Document AI, EasyOCR, and LLM-powered semantic parsing to output clean structured JSON.
- Handled multilingual documents via deep-translator and Google Translate API, processed unstructured content using Unstructured.io, and indexed extracted entities into Elasticsearch for downstream semantic retrieval and structured querying.

TECHNICAL SKILLS

Languages: Python

AI & Generative AI: LangChain, LangGraph, OpenAI, RAG, Multi-Agent Systems, Agentic AI, MCP (Model Context Protocol), Prompt Engineering, Tool Calling, HITL Workflows, Model Fine-Tuning, Vector embeddings, Semantic search.

ML & Deep Learning: Scikit-learn, TensorFlow, PyTorch, Transformers, Sentence-Transformers, NLTK, OpenCV, Hugging Face Transformers, NLP

OCR & Document Processing: Google Document AI, EasyOCR, Tesseract, PaddleOCR

Databases & Search: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch, Qdrant, FAISS, Pinecone, Chroma DB, Neo4j

Frameworks & APIs: FastAPI, Flask, Streamlit, REST APIs, Pipedrive

Web Scraping: Scrapy, Playwright, BeautifulSoup, Selenium

Cloud, MLOps & Deployment: Azure AI Foundry, Azure ML Studio, GCP (Document AI, Cloud Storage, Translate), Docker, GitHub Actions, CI/CD

Security & Tools: OAuth 2.0, JWT, SAML, Git, Postman, Jupyter

CERTIFICATIONS

- [Azure AI Fundamentals Certification](#) by **Microsoft**
- [Azure Fundamentals Certification](#) by **Microsoft**
- [Microsoft Learn Cloud Skills Challenges](#) by **Microsoft**

ACHIEVEMENTS

Recognized as Best Performer within 5 months at Combat Solutions for delivering high-impact AI solutions and consistently exceeding expectations.