

Vanshika Uttarwar

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ABOUT ME

Data Scientist with 5+ years of experience designing and building production-grade AI applications, intelligent automation systems, and scalable backend services. Specialized in **LLM orchestration, AI agents, multimodal AI, FastAPI, AWS, and LangGraph,** leveraging multiple foundation models, including **OpenAI, Gemini, Claude,** and open-source LLMs. Experienced in AI-assisted software engineering using **Cursor, Claude Code, and Antigravity** to accelerate development, debugging, and deployment of production-ready AI systems.

WORK EXPERIENCE

ScribeEMR Inc. - India, Bengaluru

Data scientist

[18/08/2025 - Current]

- Designed and developed enterprise-grade Generative AI applications for healthcare documentation automation using Python, **FastAPI, LangChain, LangGraph**, OpenAI, Gemini, Claude, PostgreSQL, and AWS.
- Built AI workflows that automatically transformed clinical guideline documents into structured prompts and JSON schemas, reducing manual configuration effort by over 80%.
- Engineered reliable multi-LLM orchestration pipelines with intelligent model routing, fallback strategies, retry mechanisms, and concurrency controls for production workloads.
- Developed production-ready **prompt engineering** frameworks for 100+ healthcare providers, improving extraction accuracy while minimizing hallucinations and ensuring consistent outputs.
- Designed multimodal AI pipelines to extract structured information from handwritten and scanned clinical documents using**Vision Language Models**, achieving 93–96% extraction accuracy while reducing inference costs by 52%.
- Built AI-powered speech-to-documentation workflows using **Whisper** and LLMs to generate structured clinical notes, extracting 25+ medical attributes with 98%+ accuracy.
- Developed secure backend services with FastAPI, PostgreSQL, **RBAC**, asynchronous processing, and GitLab CI/CD, enabling scalable deployment of AI services.
- Built agentic AI workflows using LangGraph, **MCP**, and **N8N** to automate internal reporting, notification systems, and business workflows, reducing backend latency by 95%.
- Collaborated with clinicians, product managers, operations teams, and business stakeholders to design AI solutions aligned with healthcare documentation standards.

Schoolknot - India, Remote

Data Analyst

[19/08/2024 - 30/06/2025]

- Developed SQL-based reporting pipelines processing over 1 million records, improving reporting accuracy and operational visibility.
- Built interactive Tableau dashboards to monitor attendance, fee collection, and business KPIs, supporting executive decision-making.
- Performed exploratory data analysis to identify product adoption trends and recommend improvements for future product planning.
- Developed AI-assisted assessment workflows using Large Language Models to generate personalised performance analysis and automated feedback.

- Designed prompt-driven evaluation pipelines that analyzed student responses, identified learning gaps, and recommended targeted study plans.

Encora Inc. - India, Pune

Software Developer

[02/06/2021 - 16/08/2024]

- Developed responsive web applications using React, JavaScript, HTML, CSS, and REST APIs for enterprise healthcare and education clients.
- Built Python- and SQL-based analytics solutions supporting business reporting and operational decision-making.
- Automated reporting workflows using Python (Pandas), saving over 40 hours of manual effort each month.
- Collaborated with cross-functional teams on API integration, database design, testing, and Agile software development.
- Developed reusable frontend components and improved application quality through code reviews and unit testing.

EDUCATION & TRAINING

Bachelor of Engineering (Information Technology)

Savitribai Phule Pune University [2017 - 2021]

City: Pune | **Country:** India

SKILLS

AI & Generative AI

LLMs, Prompt Engineering, RAG, AI Agents, Agentic Workflows, Structured Outputs, LangChain, LangGraph, MCP, Function Calling, LLM Evaluation, Prompt Optimization, LLM Observability (Langfuse)

Foundation Models

OpenAI, GPT-4o, Gemini, Claude, Qwen

AI Development Tools

Cursor, Claude Code, Antigravity

Backend

Python, FastAPI, Pydantic, SQLAlchemy

Cloud & Infrastructure

AWS (S3, EC2, Lambda, Glue), Docker, Git

Data & Analytics

SQL, PostgreSQL, Snowflake, SQLite, Pandas, Tableau, Excel

AI Specialisations

Vision Language Models (VLMs), Whisper, Speech AI, OCR Pipelines, Document Intelligence

Frontend

ReactJS, JavaScript, HTML5, CSS3, Tailwind CSS