

AI Engineer specializing in Autonomous Agentic Workflows and Production MLOps. Experienced in architecting **Graph-RAG bioinformatics platforms** with **shadow-mode deployment** and **decentralized GovTech digital twins**. Focused on building robust **LLM pipelines** with automated factuality checks and **PII redaction** to bridge the gap between research and scalable, full-stack applications.

Skills and Languages

- Languages: TypeScript, Python, C++
- Backend: NodeJS, Express, FastAPI
- Databases: PostgreSQL (PostGIS), MongoDB, Neo4j (GraphDB)
- Frontend: ReactJS, NextJS, React Native, Vite, JavaScript
- AI/ML: NLP, Transformers, MLOps, PyTorch, Hugging Face, OpenCV
- MLOps: MLflow, Airflow, Web Scraping (BeautifulSoup4)
- Others: Linux, Git, GitHub, Azure, Firebase

Education

- **Btech. Computer Science & Engineering**, Bhagwan Parshuram Institute of Technology, Delhi **2024–2028 (ongoing)**
- **Certifications:** [Full Stack Developer Certificate](#) – Udemy, 2025
[Oracle AI Foundation](#)- Oracle,2025

Projects

- **Bioline: AI-Powered eDNA Analysis Platform**
 - **Architected a production-grade bioinformatics pipeline** to decode environmental DNA (eDNA), utilizing **DNABERT** model for species identification
 - Developed a novelty detection system using **HDBSCAN** unsupervised learning to cluster and identify unknown organisms from unique DNA gene markers
 - **Graph-RAG:** Specifying **Cypher query generation** proves you aren't just using a basic vector store, but are handling complex, relational data structures.
 - [Deployed Website](#)
- **MoleculeX: Multi-Agent Strategic Intelligence for Pharma**
 - **Architected a "Swarm-and-Council" Agentic Workflow** using **LangGraph** to automate pharma market research, transforming raw data into verified strategic directives.
 - Orchestrated a fleet of specialized AI agents using LangChain for **dynamic task decomposition** and Gemini 3 Flash for real-time web grounding of 2024–2025 patent data.
 - [Deployed website](#)
- **RuraLens: Digital Twin for Smart Rural Governance**
 - **Architected a real-time Village Digital Twin** using **MapLibre GL** and **WebSockets** to monitor government infrastructure schemes and IoT sensor telemetry.
 - **Implemented a sub-second RAG pipeline** using **Llama 3.1-8B** and **Pathway** for natural language querying of documents with automated **PII redaction** for citizen privacy.
 - **Tech Stack:** AI/ML (PyTorch, YOLO), Web3 (Hyperledger Fabric), PostGIS, Python, Node.js, React.
 - [Deployed Website](#)

Interests

- **Selected for Winnovation Industry Internship:** Awarded a specialized internship opportunity to transition the project (BioLine) into a commercial solution for industry leaders.
- Top 10 Finalist (out of 2,500+ participants) In 5+ Hackathons at **Innovision**, **TechJam**, **VibeState**.