

Hari Om Dwivedi

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Profile

Product-driven Software Engineer with strong experience building scalable backend systems, AI-powered platforms, and data-intensive applications. Specialized in Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), embeddings, intelligent search, and conversational analytics systems. Demonstrated ability to design end-to-end architectures, optimize system performance, and deliver production-grade solutions that generate measurable business impact. Comfortable working across the full software lifecycle from system design and implementation to deployment, monitoring, and iteration in fast-paced environments.

Experience

Software Development Engineer - I, Carnation Infotech

Oct 2025 – Present

- Designed and built an enterprise-scale conversational AI platform for the Business Intelligence team, enabling natural language interaction with company-wide big data.
- Architected an LLM-powered query translation layer that converts stakeholder questions into optimized PySpark SQL queries.
- Integrated secure query execution on Apache Spark clusters with automated aggregation, validation, and post-processing of results.
- Developed intelligent summarization and visualization pipelines to return charts, tables, and insights in a user-friendly format.
- Implemented caching, query optimization, and guardrails to ensure performance, correctness, and cost efficiency.
- Reduced analytics request turnaround time from **48 hours to under 1 minute**, dramatically improving stakeholder productivity.
- Collaborated with data engineering, platform, and leadership teams to enforce access control, data governance, and scalability.

Software Development Engineer Intern, Carnation Infotech

Aug 2025 – Oct 2025

- Key contributor to *Karmik*, an AI-driven recruitment and talent intelligence platform.
- Built a robust resume parsing engine to extract structured data from unstructured PDF and DOCX resumes.
- Implemented semantic and keyword-based advanced search for efficient candidate discovery at scale.
- Designed and deployed a candidate recommendation system using embeddings and ranking algorithms.
- Led migration of the core database from MongoDB to PostgreSQL, including schema redesign and data backfill.
- Optimized queries and indexing strategies to improve search latency and reporting capabilities.

Software Engineering Intern, Propques

July 2024 – Oct 2024

- Developed AI-powered lead intelligence systems using embeddings, similarity scoring, and ranking models.
- Designed feature engineering pipelines that significantly improved lead quality and relevance.
- Improved lead-to-client conversion rates by **25%** through data-driven ranking and scoring logic.
- Led backend development of *PropSaaS*, a real estate analytics and lead management SaaS platform.
- Built automated onboarding workflows, CRM integrations, and performance analytics dashboards.
- Containerized backend services and ML inference pipelines using Docker for consistent deployments.
- Worked closely with product, sales, and leadership teams to iterate rapidly on features aligned with business KPIs.

Education

B.Tech, Computer Science and Engineering (FIRST DIVISION) SRMCEM (Affiliated with AKTU), Lucknow

2021 – 2025

- President, CSI Student Chapter - led technical initiatives, organized large-scale hackathons, and mentored 700+ students.
- Recognized for leadership, system design, and innovation through multiple national-level hackathon awards.

Selected Projects

Shopify Shop Minis - Help Me Decor & Time Traveller

[Help Me Decor](#) | [Time Traveller](#)

- Built and deployed two production-grade Shopify Shop Minis in partnership with Shopify.
- Designed interactive discovery-driven shopping experiences embedded directly within the Shop app.
- Implemented recommendation logic, UI state management, and backend integrations using Shopify Mini APIs.
- Focused on performance optimization, UX polish, and scalability for real-world usage.
- Awarded a **\$10,000 USD cash bounty** by Shopify for innovation, impact, and execution quality.

Fridge Talks - Smart Inventory & Meal Planner

[GitHub](#)

- Built an end-to-end AI system for refrigerator inventory tracking and food spoilage prediction.
- Implemented computer vision pipelines using TensorFlow and Mask R-CNN for item detection.
- Designed backend services for expiry modeling, recommendation logic, and inventory state management.
- Integrated real-time WhatsApp alerts for reminders, spoilage warnings, and meal suggestions.

Whisper - Local GenAI Assistant (WhatsApp Bot)

[GitHub](#)

- Built a privacy-first local LLM assistant providing real-time question answering via WhatsApp.
- Implemented Retrieval-Augmented Generation using embeddings and vector databases (ChromaDB).
- Designed ingestion, chunking, retrieval, and prompt-optimization pipelines for accuracy and low latency.

No Mic - Real-Time Audience Interaction Platform

[GitHub](#)

- Developed a real-time platform enabling live audience voting and Q&A during events.
- Implemented low-latency communication using WebRTC and Socket.IO with a scalable Django backend.

Core Skills

Programming Languages:	Python, Java, Kotlin, JavaScript, TypeScript, SQL, Bash
Backend Development:	Django, Flask, Node.js, REST APIs, GraphQL, Microservices
Data & Distributed Systems:	PySpark, Apache Spark, Data Warehousing, ETL Pipelines
AI / ML / LLMs:	LLMs, Embeddings, RAG, Prompt Engineering, Resume Parsing, Recommender Systems
Databases:	PostgreSQL, MongoDB, SQLite, Firebase, Cassandra, Redis
Cloud & DevOps:	AWS, GCP, Azure, Docker, Kubernetes, CI/CD (Jenkins), Linux
System Design:	Scalable APIs, Caching, Indexing, Data Modeling, Performance Optimization
Testing & Quality:	Unit Testing, Integration Testing, API Testing, Debugging
Tools & Platforms:	Git, Postman, Vector Databases (ChromaDB), MLOps fundamentals

Achievements & Certificates

- **First Prize**, Hack-To-Crack, AKTU Lucknow
 - **Second Prize**, UP Police Hackathon 2022
 - **Second Prize**, HackOFiesta, IIIT Lucknow
 - **Most Innovative Hack**, HackCBS, Delhi
- **Cybersecurity Fundamentals**, IBM 
 - **Data Privacy Fundamentals**, Cognitive Class 
 - **Introduction to Cloud**, IBM SkillsBuild 
 - **Data Science for Business - Level 1**, IBM 