

SHIREEN MEHER CHIRRAVURI

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in shireenmeherchirravuri

🌐 ShireenMeher

🔗 Portfolio

SUMMARY

Backend engineer with 4+ years of experience building high-scale production systems in fintech and search domains. Delivered 45% latency improvements and designed event-driven architectures processing 1M+ records. Experienced with AWS infrastructure, distributed database design (SQL/NoSQL/graph), and performance-oriented system architecture grounded in strong DSA fundamentals.

TECHNICAL SKILLS

Programming Languages : Python, Java, Golang, JavaScript (Intermediate), C, PHP

Tools & Frameworks : REST APIs, Docker containers, Kubernetes, AWS, Postman, Retool, Git, Flask RESTful, Elasticsearch, OpenSearch, SDLC, Object-Oriented programming, System Design, DBMS, OS, Computer Networks, Cypher, SQL, CI/CD

Databases & Environments : Neo4j, MongoDB, PostgreSQL, MySQL, Linux

WORK EXPERIENCE

AI Research Intern

Meta | Jan 2026 - Present

FactCurriculum: Adaptive Verifiable Factual Training to Reduce Hallucinations in LLMs

- Designing FactCurriculum, an adaptive, auto-verifiable factual training framework for LLMs using KB-backed QA tasks and RL to study hallucination reduction and confidence calibration.
- Building evaluation pipeline to measure factual accuracy and hallucination rate against SFT baselines across various models.

Distributed Systems & Backend Projects

Distributed Stock Trading Platform - Replication & Fault Tolerance

Apr 2025

- Designed a microservices-based trading system with a replicated order service using leader-based routing, re-election, and log replay for crash recovery under concurrent writes. Added LRU caching with server-driven invalidation; deployed via Docker Compose and evaluated load and failure scenarios on AWS.

BudgetBuddy - Expense & Budget Management System

Mar 2025

- Built a modular MVC-based expense and budgeting backend with authentication, categorization, and analytics. Applied Strategy pattern for extensible filtering and implemented validation with unit-tested services.

Software Engineer II

Venwiz | Mar 2023 - Jan 2025

Category Connect & Asynchronous Vendor Processing

- Designed an event-driven ingestion pipeline (Lambda + SQS + SNS) to process 0.7–1M vendor records, choosing async fan-out to handle bursty workloads and avoid backpressure on downstream search indexing.
- Designed a hybrid search and ranking system in Elasticsearch, combining OpenAI embedding based semantic search with Lucene-based kNN and keyword relevance scoring, supported by custom tokenization and analyzers for noisy industrial-domain text. Integrated ranked vendor outputs into production search pipelines, improving coverage and relevance for category-based vendor discovery at scale.

Search & Relevance Platform

- Owned core search and tagging infrastructure for industrial procurement, solely maintaining the Neo4j graph database with complex traversals, APOC-based queries, efficient indexing, and schema customization.
- Designed relevance signals and ranking strategies achieving 70% relevance across production queries, and built a self-serve graph and tag management system using Python Flask and Retool for real-time relationship management.
- Developed scalable APIs for tagging workflows and graph relationships, and integrated GPT-based APIs to auto-generate and enrich vendor metadata, strengthening discovery and downstream search relevance.

Software Engineer

Razorpay | July 2021 - Feb 2023

Payment Systems & Platform Modernization

- Improved performance and reliability of high-throughput payment and merchant activation flows by introducing goroutine-based concurrency and replica database configurations, reducing P99 latency by 45% and support tickets by 35%.
- Designed and productionized Rule-Based Method Enablement, a real-time, event-driven system that automatically configures merchant payment methods based on dynamic business parameters, using Laravel events and a custom domain model with end-to-end ownership.
- Contributed to API decomposition from a monolith to microservices, resolving data mismatches and coordinating across teams to fix 341 failing unit tests, stabilizing releases and improving service isolation.

EDUCATION

University of Massachusetts Amherst

Masters in Computer Science | GPA: 4.0/4.0

Jan 2025- Dec 2026 (Expected)

Indian Institute of Technology Bhubaneswar

Bachelor of Technology

2017-2021