

# Esha Sherry

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## EXPERIENCE

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### Softchoice

**Aug 2025 – Present**

Sr. Software Engineer, AI

Toronto, ON

- Built a conversational Text-to-SQL agent using LangGraph and LangChain, enabling non-technical sales users at a packaging company to query an Amazon Redshift data warehouse using natural language.
- Designed a multi-tool agent architecture with FastAPI, integrating a SQL Database Toolkit (query executor, validator, schema explorer) and a Schema Catalog of fact/dimension table metadata to generate accurate, context-aware queries.
- Implemented prompt engineering strategies including join pattern injection, clarification logic, and few-shot SQL examples to minimize context rot and improve query accuracy.
- Integrated AWS Bedrock (Claude/Nova) as the LLM backbone with LangGraph's MemorySaver for multi-turn conversational state, served through a Streamlit UI.

### Architech

**Aug 2024 – Aug 2025**

Technical Lead

Toronto, ON

- Led a Proof-of-Concept (POC) for an AI-powered document automation solution, significantly optimizing contract data extraction for a major logistics firm.
- Built a data extraction pipeline using Azure Document Intelligence to efficiently process PDF and Word contracts with diverse layouts, structuring the information sequentially.
- Integrated OpenAI models to intelligently parse and extract key details from paragraphs and unstructured notes, generating standardized Excel templates.
- Leveraged Retrieval-Augmented Generation (RAG) techniques to accurately retrieve critical data points not located within or near structured tables.
- Reduced manual contract processing time from 3–4 hours per document down to 5–6 minutes, delivering substantial operational efficiency.
- Enabled projected annual savings of \$5 million, demonstrating significant ROI and paving the way for enterprise-wide adoption.
- Developed an AI-based document clustering solution for a major telecommunications client to identify and group similar procedural and FAQ documents.
- Built a processing pipeline that extracted content from JSON files, summarized them using OpenAI, generated embeddings, and computed cosine similarity to create a similarity matrix.
- Enabled the client to streamline documentation, eliminate redundancies, and improve content discoverability.
- Built a Conversational AI collections system using Twilio for automated medical debt recovery calls, drastically reducing manual effort and enabling simultaneous call handling.
- Integrated ElevenLabs for realistic text-to-speech and speech-to-text interactions, enhancing user engagement.
- Implemented semantic retrieval through vector embeddings and graph database queries, with a fallback to LLM for unmatched queries, ensuring robust conversational accuracy.
- Deployed microservices to Kubernetes on Azure, leveraging container orchestration for scalability and resilience.

## Jobvite

Apr 2021 – Aug 2024

Senior Software Engineer

Kitchener, ON

- Led the development of a high-performance integration application using Apache Kafka and Apache Camel to rapidly process CRM data and share real-time updates on LinkedIn via API calls.
- Engineered a Camel-based Kafka consumer to effectively manage incoming CRM data streams, enabling seamless automated postings to LinkedIn.
- Collaborated with cross-functional internal teams to design and deliver application features using Java, Spring Framework, Docker, and AWS.
- Developed robust RESTful APIs to facilitate efficient data retrieval, manipulation, and seamless integration with frontend and external systems utilizing JSON and XML formats.
- Designed and launched a powerful search functionality within the integration application leveraging Java 11, JavaScript, and MySQL, resulting in an 80% increase in internal team productivity.
- Mentored junior engineers, boosting overall team productivity by 20%, while consistently promoting adherence to high-quality software design standards and professional practices.

## LoyaltyOne

Sep 2016 – Apr 2021

Software Engineer

Toronto, ON

- Played a key role in the transaction team, spearheading the migration of legacy applications to AWS cloud infrastructure, demonstrating strategic modernization and cloud adoption capabilities.
- Led the implementation of DevOps practices including automated testing, continuous delivery, and infrastructure as code (IaC), significantly enhancing software quality and deployment speed.
- Developed high-performance Java applications capable of processing over 500,000 data records in real-time from data streams (AWS Kinesis), utilizing Spring Boot and Spring Batch to ensure scalable, robust data handling.
- Designed and implemented efficient, scalable REST APIs using Java and Spring Boot, enabling seamless GET and POST operations, improving system interoperability and data management.
- Utilized APM tools such as New Relic and Splunk to monitor application performance and troubleshoot production issues, reducing mean time to resolution.

## EDUCATION

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### Humber College

2014

Post Grad Certificate in Information Technology Solutions

Etobicoke, ON

- Coursework: SDLC, Android Development, Java, HTML, CSS, JavaScript
- Capstone Project: Data visualization website in collaboration with QuickTap Survey

### Punjab University College of Information Technology

2010

Bachelor's Degree in Computer Science

Chandigarh, PB

- Coursework: CS Fundamentals, Data Structures & Algorithms, Programming Languages

## OTHER

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### Technical Skills

- **AI/ML & NLP:** Prompt Engineering, Scikit-Learn, Embedding Models, LLMs, LangChain, LangGraph, N8N
- **Languages & Frameworks:** Python, Java, FastAPI, Spring Boot
- **Cloud & DevOps:** Azure, AWS, Kubernetes, Docker, CI/CD
- **Frontend:** React, Streamlit, HTML, CSS, JavaScript, TypeScript
- **Databases:** Cassandra, Redis, Neo4j, ChromaDB, Pinecone, MySQL
- **Messaging & Streaming:** Apache Kafka, Apache Camel, Azure Service Bus

### **Certifications & Training:**

- **AWS Certified Developer** - Amazon Web Services
- **ChatGPT Prompt Engineering for Developers** - DeepLearning.AI
- **Kafka Essential Training** - LinkedIn
- **Problem Solving Certificate** - HackerRank