

Esha Sherry

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EXPERIENCE

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

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

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