Esha Sherry

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EXPERIENCE

Architech   **August 2024 – Present**
Technical Lead   Toronto, ON

- **AI-powered Document Automation**
  - 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.

- **AI-powered Document Clustering**
  - 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.

- **Collections AI**
  - 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
Senior Software Engineer

April 2021 – August 2024
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
Software Engineer

September 2016 – April 2021
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
Post Grad Certificate in Information Technology Solutions

September 2014
Etobicoke, ON

- Coursework: Software Development Life Cycle (SDLC), Android Development, Java, HTML, CSS, JavaScript.
- Capstone Project: Developed a data visualization website in collaboration with QuickTap Survey, showcasing survey results and providing real-world experience.

Punjab University College of Information Technology
Bachelor's Degree in Computer Science

May 2010
Chandigarh, PB

- Coursework: Computer Science Fundamentals, Data Structures and Algorithms, Programming Languages, and Hardware Concepts.

OTHER

Technical Skills

- **Languages & Frameworks**: Python, Java, FastAPI, Spring Boot
- **Frontend**: React, HTML, CSS, JavaScript
- **AI/ML & NLP**: Prompt Engineering, Scikit-Learn, Embedding Models, LLMs
- **Databases**: Cassandra, Redis, Neo4j (Graph DB), ChromaDB, Pinecone (Vector DB)
- **AI Tooling & Orchestration**: LangChain, N8N (Agent Automation)
- **Messaging & Streaming**: Apache Kafka, Apache Camel, Azure Service Bus
- **Cloud & DevOps**: Azure, AWS, Kubernetes

Certifications & Training:

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