

Yashika Jain

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EDUCATION

University of Toronto

Honors Bachelor of Science in Computer Science & Statistics

Toronto, CA

Sept. 2023 - April 2027

Relevant Courses: Machine Learning, Artificial Intelligence, Data Structures & Algorithms, Discrete Mathematics

EXPERIENCE

Lead Agentic AI Engineer

April 2025 – Present

Vegas Consulting

Dubai, UAE

- Led end-to-end AI architecture for a SaaS onboarding assistant enabling real-time search across 10,000+ manufacturing documents.
- Designed and evaluated a hybrid retrieval architecture combining vector databases (ChromaDB, Pinecone) and a Neo4j knowledge graph to support agentic reasoning within a multi-agent RAG system.
- Developed the full-stack product (FastAPI/Flask + React) with Stripe billing, achieving sub-500 ms response times through vector search and prompt optimization
- Containerized and deployed services on GKE using Docker and Cloud Build CI/CD, reducing pilot infrastructure costs by 40% while supporting scalable, production-grade workloads.
- Integrated AI workflows with enterprise ERP systems via REST APIs & led testing to ensure production readiness.

Undergraduate AI Researcher – CS Education

Sept 2025 – Dec 2025

University of Toronto

Toronto, ON

- Implemented and evaluated AI-driven metacognitive scaffolding techniques within a program-visualization system to improve debugging and self-explanation in introductory CS.
- Designed and implemented an adaptive AI-driven hint-generation system by extending execution-trace and event-model architectures to deliver context-aware guidance.
- Prototyped and evaluated LLM-based tutoring components, experimenting with retrieval-augmented prompting and error-pattern detection to improve feedback quality.
- Applied HCI and cognitive load principles to redesign learning workflows and student-facing interactions, informing system-level improvements.

Blockchain Software Intern

May 2022 – Jul 2022

Collabera Inc.

Toronto, ON

- Built and deployed blockchain-backed services using AWS, Docker, and Go in a Linux environment.
- Proposed and prototyped Blockchain + IoT use cases integrated with cloud services.
- Co-designed the MVP for a Revenue Cycle Management system on AWS Blockchain.
- Delivered a production-ready blockchain module used for payer-provider interactions.

PROJECTS

MeetingMind – AI-Based Service | *Python, GCP, Vertex AI, React*

- Developed a GCP-based system that converts meeting audio into structured summaries and action items using Vertex AI-powered speech and NLP pipelines.
- Built a vector-based semantic Q&A system using OpenAI, LangChain, and FAISS over meeting transcripts.
- Designed end-to-end ingestion and indexing workflows enabling low-latency retrieval over long-form audio transcripts.

AI EduGuide BOT | *Python, Streamlit, Flask, FAISS, LangChain*

- Developed an AI chatbot for academic queries using retrieval-augmented generation with FAISS and custom prompt logic.
- Implemented custom prompt logic and conversational flows to support context-aware multi-turn reasoning.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL, JavaScript, R

Frameworks: React, Node.js, Flask, LangChain, PyTorch, FastAPI, TensorFlow

Developer Tools: Git, Docker, Google Cloud Platform, Visual Studio, PyCharm, IntelliJ, ChromaDB, FAISS