# Aryan Awasthi

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### Education

Concordia University

Master of Applied Computer Science

August 2023 - May 2025

Montreal, Quebec

July 2017 - June 2021 **Amity University** 

Bachelor of Technology in Computer Science and Engineering

Noida, India

#### Skills

Programming Languages: Python, Java, C++, TypeScript, SQL.

LLMs & Generative AI: LangChain, LangGraph, FAISS, Pinecone, Elasticsearch, Gemini API, Llama3, TensorFlow, Vertex AI.

Backend & APIs: FastAPI, Flask, REST APIs, WebSockets, Play Framework, Akka Actors, Node.js, Hono, BullMQ.

Frontend & UI/UX: Next.js, React, Tailwind CSS, HTML, CSS, Material Design, Android SDK.

Databases & Storage: PostgreSQL, MySQL, Redis, Vector Databases (FAISS, Pinecone), Apache Spark, Hadoop.

Cloud & DevOps: AWS (SageMaker, Lambda, S3), Docker, Kubernetes, Vercel, GitHub Actions, MLflow, Kubeflow, CI/CD, Git.

Modern Tools & Frameworks: Bun, Playwright, Xenova/transformers, Cloudinary, Streamlit, n8n, SonarQube, Grafana.

Soft Skills: Analytical Thinking, Innovation, Problem-Solving, Team Collaboration, Adaptability.

### Experience

## Amazon Canada FC, ULC

October 2023 - May 2025

 $Associate\ I$ 

Montreal, QC, Canada

- Provided technical support for warehouse operations, resolving 100+ device issues daily and maintaining 95% uptime.
- Automated routine tasks using scripting tools, reducing manual errors by 15% and improving efficiency by 20%.
- Monitored system performance and analyzed logs to identify and resolve technical issues, reducing incident response time by 30%.
- Collaborated with cross-functional teams to implement system improvements, resulting in 25% faster problem resolution.
- Maintained documentation for technical procedures and provided training to 15+ team members on new systems.
- Ensured compliance with IT security protocols and data protection standards, achieving 100% compliance in warehouse operations.

## Comviva

June 2021 - August 2021

TechOps Engineer

Gurugram, India

- Developed and maintained enterprise applications using Java and Spring Framework, serving 500+ users across multiple projects.
- Implemented RESTful APIs and microservices, improving system scalability by 40% and reducing response time by 25%.
- Collaborated with cross-functional teams to deliver software solutions, completing 15+ projects within deadlines.
- Performed code reviews and implemented best practices, reducing bug reports by 30% and improving code quality.
- Worked with databases including MySQL and PostgreSQL, optimizing queries and improving performance by 35%.
- Participated in Agile development processes and contributed to sprint planning, achieving 95% sprint completion rate.

#### Projects

Tik AI - TikTok AI Agent | Next.js 14, React 18, TypeScript, Tailwind CSS, Google Gemini 2.5 Flash, Google Veo 2/3, Gemini API. June 2025 - Sep 2025Vertex AI | Website

- Built AI-powered content analysis system using Google Gemini 2.5 Flash with 90%+ accuracy and <2s response time.
- Integrated Google Veo 2 model for video generation with 5-8s promotional content and 3-5min generation time.
- Built Next. js dashboard with TypeScript and Tailwind for unified content workflow supporting 100+ concurrent users.
- Created scalable service-oriented architecture with modular AI services handling 1000+ video assets.
- Implemented production-ready deployment with Docker containerization and Vercel achieving 99%+ uptime.
- Integrated multiple Google AI services with fallback mechanisms supporting 4+ video styles and 3+ aspect ratios.

Scrapy - TikTok Scraper with AI-Powered Vector Search | Bun, Hono, BullMQ, Redis, Playwright, Xenova/transformers, TypeScript, July 2025 - Aug 2025 PM2, Docker | Website

- Successfully scraped 100+ TikTok videos with comprehensive metadata extraction.
- Created AI vector search using all-MiniLM-L6-v2 with 100ms embedding and <50ms search time.
- Created a scalable architecture that handles 1000+ concurrent embeddings efficiently.
- Implemented BullMQ + Redis queue processing 3 jobs/5s with 120s timeout protection.
- Designed scalable storage achieving **2KB per video** with efficient memory management.

Multi-Agent LLM Chatbot with Reinforcement Learning | Python, Llama3, LangChain, FAISS, FastAPI, Streamlit, RLHF GitHub January 2025 - April 2025

- Implemented a multi-agent chatbot system achieving 92% routing accuracy and 87% response relevance across diverse queries.
- Improved the RAG pipeline with FAISS integration, 3x context retrieval speed.
- Integrated Human feedback reinforcement learning (RLHF), boosting engagement by 35% and reducing latency by 45%.
- Developed and trained a reward model on 1,000 + feedback logs to enable adaptive response re-ranking.
- Developed an interactive Streamlit dashboard for real-time analytics, feedback collection, and performance monitoring.

TubeLytics v2 - Reactive YouTube Analytics Dashboard | Java, Scala, Play Framework, Akka Actors, WebSockets, Docker, GitHub Actions | GitHub September 2024 - December 2024

- Designed a real-time dashboard that streams channel, video, and tag analytics from the YouTube Data API v3 via WebSockets for a smooth, refresh-free user experience.
- Introduced Akka actor supervision and request caching, trimming YouTube API calls by 60% in typical usage scenarios.
- Added word-frequency and tag modules that process 1M+ description words per query without blocking the main event loop.
- Achieved 90%+ unit-test coverage on controllers and services with JUnit 5 and sbt CI checks.