Thomas Assalian

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EDUCATION

Concordia University   Sep 2023 – May 2027 (Expected)
Bachelor of Computer Science   *Montreal, QC*
- Dean's List (2023 - 2024) – **GPA: 3.97**
- Golden Key International Honour Society (Top 15% of Students)

EXPERIENCE

AI Software Developer Intern   May 2025 – Aug 2025
UKG   *Montreal, QC*
- Developed a scalable **Agentic RAG prototype** with semantic caching for LLM-powered question answering over internal documents, reducing response time by **23×** and lowering compute costs by **$200K annually**
- Refactored the AI agent SDK for **full asynchronous execution** of all agent tool calls and used a **custom async HTTP client** for REST API calls, increasing tool execution speed by up to **40%**
- Boosted **test coverage to 98%+** by implementing unit and integration tests across AI agent and RAG pipelines

Data Engineer Intern   Sep 2024 – Dec 2024
Alstom   *Montreal, QC*
- Engineered **Python-based datasets**, powering **Tableau** dashboards that enhanced operational efficiency by **80.2%** through data-driven decision-making
- Built scalable Python **ETL pipelines** for real-time data extraction, cleaning, and storage using NumPy and Pandas, decreasing manual processes by **95%** and enabling predictive maintenance reporting
- Collaborated with **cross-functional teams** to ensure accurate data for business reporting

Data Analyst   Jan 2024 – Jun 2024
TELUS International AI Data Solutions   *Remote*
- Ensured **100% compliance** with AI project standards by evaluating and validating datasets used in machine learning models for accuracy and relevance
- Improved data quality by **20%** across multiple AI projects by conducting rigorous quality assurance

LEADERSHIP

Lead Machine Learning Engineer   Sep 2024 – Feb 2025
Space Concordia, Concordia University
- Mentored a team of five on **machine learning** theory and practical model development, guiding the team toward the creation of a CNN model
- Collaborated with Space Concordia leadership to design and present aerospace **research proposals**, **securing interest** from external organizations for future project development

PROJECTS

Neurograb - UKG Hackathon | *Python, LangChain, MongoDB, Docker, Redis, Google Gemini, CSS*   June 2025
- Designed a containerized full-stack pipeline for an **Agentic RAG** service using **LangChain**
- Integrated AI Agent Orchestration, **LLM** reasoning over retrieved information, concurrent multi-tool use, **Redis** caching, and **MongoDB** vector search
- Reduced response time by up to **23×** and **saved $200K** annually by implementing **semantic caching**

TalentBase | *Java, Spring Boot, React.js, AWS, Docker, PostgreSQL*   Feb 2025
- Created a **full-stack** web application with **Spring Boot** and **React.js**, allowing users to upload files to employee profiles via **AWS S3**, deployed with **ECS on EC2** and secured using **IAM roles**
- Utilized **AWS SDK** to manage real and local S3 storage for testing, stored employee metadata in **PostgreSQL**, and containerized the system using **Docker**

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, C/C++, C#, HTML/CSS, TypeScript
Other: RESTful APIs, Redis, MongoDB, Spring Boot, AWS, Docker, FastAPI, React, SQL, MCP, LangGraph, Arize, Kubernetes, Linux, Git, Next.js, Tailwind CSS