

# ALEX LEVESQUE

alex12levesque@gmail.com | linkedin.com/in/alex-levesque | github.com/alexlevesque | alex-levesque.com

## Education

### Queen's University

Sep 2024 – Apr 2028

*Bachelor of Engineering in Applied Mathematics and Computer Engineering (GPA: 3.5)*

*Kingston, Ontario*

- Relevant coursework: C++, Data Structures and Algorithms, Linear Algebra, and Probability Theory
- Activities: AI Club, Engineering Consulting Club, Orientation Leader

## Work Experience

### LLM Research Member

June 2025 – Sep 2025

*Algoverse AI Research*

*Remote*

- Conducted AI Research in a 12-week program led by PhDs from Meta, UCSD, and Cornell, combining weekly lectures with personalized mentorship.
- Co-authored a research paper proposing entropy-based contrastive decoding techniques to improve Mixture-of-Experts (MoE) model efficiency and performance.
- Utilized platforms such as Google Colab, Jupyter Notebooks, and RunPod to train, evaluate, and benchmark large-scale language models.

### AI Technician Intern

May 2025 – Aug 2025

*Government of Canada – Immigration and Refugee Board*

*Ottawa, Ontario*

- Developed a Microsoft Power Automate workflow to transcribe and classify refugee Basis of Claim documents, achieving 93% accuracy and significantly reducing manual processing time.
- Created an automated **NLP pipeline** using **Microsoft Azure** Language Service to extract sentiment and opinion insights from claimant documents, enabling faster triage and improved decision-making in insurance/legal workflows.
- Engineered a scalable Microsoft Azure-based chatbot to extract and vectorize legal documents, achieving sub-10-minute ingestion into **Cosmos DB (NoSQL)** with optimized embedding workflows.

## Projects and Extracurricular Experience

### Clue Game Engine – Bayesian Probability Project | *Python, Streamlit, Bayesian Inference, Probability*

- Developed a real-time probabilistic game engine to beat the board game Clue using Bayesian inference, achieving 95% win accuracy after 8+ turns in simulated games.
- Engineered a dynamic data structure and game state to track player hands and suggestion history, and applied Bayes' Rule to update conditional probabilities of 21 cards based on live evidence.

### Queen's University Artificial Intelligence Club | *Research Paper | Ethics Paper*

- Co-authored and published analysis and research on evolving copyright laws in generative AI, focusing on the intersection of intellectual property and emerging technologies (Published to CUCAI 2025).
- Researched applications and ethical implications of machine learning in finance, specifically random forests for stock price prediction and their applications at top firms.

### GRAMMY-Winning Music Business/Entrepreneur

- Received a GRAMMY Award for Best Rap Album (Killer Mike - MICHAEL, 2024).
- Made over \$50,000 in gross income by producing for platinum-selling artists (Migos, Peso Pluma, Polo G) and world-renown record labels (Universal, Sony, Warner Atlantic).

## Technical Skills & Interests

**Programming Languages:** Python, C, C++

**Libraries & Frameworks:** Pandas, NumPy, Matplotlib, Scikit-learn, Streamlit

**Tools & Platforms:** Git, Microsoft Azure, Copilot Studio, n8n, AWS, SOLIDWORKS, Microsoft Office

**Interests:** Music Production, Karate (Black Belt), Piano, Chess, Motorsports, Weightlifting, Radiohead

**Languages:** Fluent in English and French