




Alex Lee

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EDUCATION

- **University of Toronto** **GPA: 3.97/4.00**
Bachelor of Science in Computer Science, Minor in Mathematics | Dean's List *Expected Jun. 2026*
 - **Courses:** Software Tools & Systems Programming, Data Structures & Analysis, Computer Organization, Theory of Computation, Operating Systems, Advanced Calculus
 - **Societies:** University of Toronto Machine Intelligence Student Team









SKILLS

- **Languages:** C, Python, Java, JavaScript, HTML/CSS, SQL, Bash
- **Frameworks and Tools:** Flask, Git, Microsoft Azure, PostgreSQL, React, Tailwind CSS, Next.js, NumPy

EXPERIENCE

- **Microsoft** Redmond, WA
Incoming Software Engineer Intern *May 2025 - Aug. 2025*
- **Department of Mathematics, University of Toronto** Toronto, ON
Incoming Teaching Assistant *Jan. 2025 - Apr. 2025*
 - Teaching **Linear Algebra I** (MAT223) for Winter 2024
- **Microsoft** Redmond, WA
Software Engineering & Product Management (Explorer) Intern *May 2024 - Aug. 2024*
 - Designed and developed a customer support **AI** chatbot for a querying service keeping track of **100 billion+** certificates and secrets used across the company
 - Leveraged **Azure OpenAI** resources to create a **GPT-3.5**-powered solution, optimizing chatbot response latency to **<3 seconds**
 - Implemented **retrieval-augmented generation (RAG)** to facilitate dynamic, up-to-date data retrieval using embedding models and vector search
 - Optimized granularity and chunking size of search indexes, improving chatbot response accuracy by **30%**

PROJECTS

- **Calculus Derivative Calculator** | *Python, HTML, CSS, JavaScript, Flask, MathJax*  
 - Capable of **differentiation with complete steps** and algebraic simplification, built **completely from scratch** without using any math-related libraries
 - Implemented in Python using binary expression trees and **self-designed recursive algorithms** for calculation, and the shunting yard algorithm for parsing mathematical expressions
 - Utilized **MathJax** for displaying visually appealing mathematical expressions in the frontend
- **KnowYourBias** | *Python*  
 - An **AI** web app that detects the political bias of the news article the user submits, and presents other articles on the same topic with different viewpoints
 - Used APIs from NewsCatcher and **Amazon AWS** for article search and keyword extraction
- **Jang-gi (Korean Chess)** | *Java*  
 - Implemented game logic leveraging the principles of object-oriented programming
 - Designed and implemented an easy-to-use graphical user interface utilizing **Java Swing**, allowing for a seamless user experience
- **Atlas News** | *Python, Flask, SQLAlchemy*  
 - A decentralized news website that allows users to stay up-to-date with events around the world complemented with a discussion forum
 - Managed database storing user and article data with **SQLAlchemy** and hosted website using **Flask**