




# Alex Lee

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## EDUCATION

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- **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 Design, Software Tools & Systems Programming, Data Structures & Analysis, Computer Organization, Theory of Computation
  - **Societies:** University of Toronto Machine Intelligence Student Team

## SKILLS

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- **Languages:** Python, Java, C, JavaScript, HTML/CSS, R, Bash
- **Frameworks and Tools:** Flask, SQLAlchemy, Git, Microsoft Azure









## EXPERIENCE

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- **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

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- **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**

## ACTIVITIES

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- **Inova Computer Association** Vancouver, BC  
*Executive Director* *Sep. 2021 - Jun. 2022*
  - Led a team of 6 students organizing webinars about careers in technology, targeting local students
  - Received **70+** sign-ups for federal government-funded events featuring 5 guest speakers