# Alex Lee

#### **EDUCATION**

## University of Toronto

Honours Bachelor of Science in Computer Science. Minor in Mathematics

**cGPA:** 3.97/4.00 Sep 2022 - May 2026

Relevant coursework: Foundations of Computer Science I/II, Calculus with Proofs, Linear Algebra I Activities & Societies: U of T Machine Intelligence Team, Arts & Science Internship Program (Co-op)

#### SKILLS

Languages: Python, Java, JavaScript, HTML/CSS

Frameworks and Tools: Flask, SQLAlchemy, Java Swing

#### **PROJECTS**

# Calculus Derivative Calculator | Python □ ♂

- Capable of differentiation with complete steps and algebraic simplification
- Built completely from scratch without using any math-related libraries
- Implemented using binary expression trees, and utilized the shunting yard algorithm for processing mathematical input and self-designed recursive algorithms for differentiation and algebraic manipulation
- Created a Flask back-end server and used PythonAnywhere for online deployment

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- An online version of Jang-gi, a Korean chess game
- Implemented game logic leveraging the principles of object-oriented programming
- Used Java Swing to implement the graphical user interface of the game

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- A global news website with a discussion forum
- Used Flask for the back-end and SQLAlchemy to manage a database

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- A 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

# ACTIVITIES

# **Inova Computer Association**

Vancouver, BC

Executive Director

Sep 2021 - Jun 2022

- Led a team of six high school students organizing online events related to computer science
- Searched for guest speakers and promoted events to high school students in Greater Vancouver, receiving 70+ sign-ups in total
- Received a government-funded grant to fund the events
- Successfully hosted two events, a university student panel and a software development webinar, featuring guest speakers from the industry

## Point Grey Computer Science Club

Vancouver, BC

Club President

Sep 2021 - Jun 2022

• Taught club members programming in Python and Java, as well as 3D modeling with Blender in weekly meetings

#### AWARDS

BC Achievement Scholarship | Issued by the British Columbia Ministry of Education District/Authority Scholarship | Issued by the British Columbia Ministry of Education Point Grey Academic Scholarship | Issued by Point Grey Secondary School