Alex Lee

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EDUCATION

University of Toronto

HBSc in Computer Science, Minor in Mathematics, A&S Internship Program (Co-op)

cGPA: 3.97/4.00 Sep 2022 - Jun 2026

Relevant coursework: Foundations of Computer Science I/II; Software Design; Intro to the Theory of Computation; Advanced Calculus; Linear Algebra I; Probability, Statistics & Data Analysis I

Activities and Societies: U of T Machine Intelligence Student Team

SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, R

Frameworks and Tools: Flask, SQLAlchemy, Git, Java Swing

PROJECTS

Calculus Derivative Calculator | Python ☑ ♂

- Capable of differentiation with complete steps and algebraic simplification with 100% accuracy
- 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

- 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

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

- 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 federal 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