ALBERT LAY

Software Developer

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Technical Skills

Languages	|	JavaScript, TypeScript, C#, C++, Python, Bash, HTML, CSS
Technologies	|	React, .NET, Git, Jest, Sass, Figma

Relevant Experience

Imagine Communications | Full Stack Web Developer

Jan 2022 - present

Tools: C#, .NET, PostgreSQL, Vue, PowerShell, Mercurial, Jira

- Collaborating in an agile team of 18 to develop features for a cloud-based schedule-execution engine used by broadcasting companies worldwide.

International Hub | Web Developer

Jul 2021 - Oct 2021

Tools: React (Bootstrap & Styleguidist), Sass, Jest, ESLint

- Headed the development of the redesigned website to serve **1600+ community members**.
- Transformed design mocks into a fully functional single-page application using a reusable, modular, component architecture.

UW MathSoc | Web Developer

Jan 2021 - Apr 2021

Tools: WordPress, Avada

- Spearheaded the development of the MathSoc Cartoons page in collaboration with their coordinator, which houses **18 comics** created over 3 terms.
- Updated website with events targeted to **8,000+ students** in the Faculty of Mathematics.

Projects

ChamberCrawler3000

Tools: C++, NCurses

- CS 246 group final project awarded a mark of **98.5%** on correctness, design, and documentation.
- Applied **object-oriented** design patterns, including the decorator and MVC patterns, to build a class hierarchy with low coupling, high cohesion, and resistance to change.

Unbeatable Tic-Tac-Toe

Tools: TypeScript, Sass, Jest, Webpack, ESLint, JSDoc

- Web-based tic-tac-toe equipped with three modes, including an unbeatable AI utilizing **Newell and Simon's algorithm**, and tested under **1 million automated randomized plays**.
- Employed unit and integrations tests to achieve **93% line coverage**.

Stats Made Easy

Tools: Python, Tkinter, NumPy, SciPy, Matplotlib

- **Graphical native application** allowing users to calculate the probability of random events.
- Implemented support for the **normal, binomial, and Poisson distributions**; including a graphing feature for normal distributions.

Education

University of Waterloo | GPA 3.95/4.00

2020 - 2025 (expected)

Candidate for B.SC, Honours Computer Science

- **1 of 20** recipients of Computer Science International Upper-Year Scholarship ($3000, Jul 2021).
- University of Waterloo President's Scholarship of Distinction ($2000, Apr 2020).