# ALBERT LAY

Software Developer

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## Technical Skills

| | | |
|---|---|---|
| Languages | \| | TypeScript, C#, Go, C++, Python, Bash, HTML, CSS |
| Technologies | \| | React, Vue, .NET, AWS, Git, Jenkins, Jest, Sass, Figma |
| Certifications | \| | AWS Certified Cloud Practitioner |

## Relevant Experience

### Imagine Communications | Full Stack Web Developer

Jan 2022 - Apr 2022

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

- Redesigned Schedule Execution Service's data model to accept user-defined functional types while maintaining **backward compatibility** with previous JSON schedules.
- Built a concurrent process that emits **RabbitMQ messages** when functional types are updated.
- Implemented default Update Ignore masks to preserve the product's interface and minimize initial disruptions to customers' workflows when upgrading.

### 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

### 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**.

### 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.

## 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).