

Alex Lee

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TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, R, Javascript, Typescript, SQL, Bash

Database: MySQL, MongoDB

Frameworks/Libraries: NumPy, Pandas, Matplotlib, OpenCV, SciKit, BeautifulSoup, React, Spring

Development Tools: Git, Linux, AWS, Make

PROJECTS

AI/ML Football Analysis | *Python, OpenCV, Pandas* | Github

- Developed football analysis system using **Python** and **OpenCV** to get insights of the football games.
- Integrated object detection and tracking to extract and interpolate player and ball movements from video frames.
- Enhanced analysis by tracking objects with field coordinates, allowing calculation of player speed and distance.

Virtual Academic Management System | *Java, Javascript, MySQL* | Github

- Built a full-stack academic management platform with over **20** pages using **Java**, **Javascript**, and **MySQL**.
- Implemented over **10** essential features, CRUD operations, real-time chat, custom filters, and dynamic views.
- Distributed the web project through Apache Tomcat server using the **EC2** service from **AWS**.
- Ensured reliability by writing over **200** test cases and resolving critical errors such as multiple PK issues, file upload errors, time zone mismatches, interval setting errors, etc.

Personal Portfolio Website | *Typescript, React, SASS* | Github | Link

- Developed a personal portfolio website using **React** to visualize my personal background, skills, and projects.
- Designed a modern portfolio website, including responsive layouts, smooth hover effects, and a customized color theme for better user experience, using **SASS**.

Biquadris Game | *C++, X-Window* | Github

- Led a team of three to build Biquadris, a Latinization game of Tetris, using **C++**.
- Built a visually responsive game board with real-time score tracking and piece previews using **X Window**.
- Conducted over **500** test cases to ensure stability and reduce runtime errors during play sessions.

EXTRA CURRICULAR

Executive of Finance Team

September 2024 - Present

Association of Korean Canadian Scientists and Engineers

Waterloo, ON

- Conveyed notable accountability and organization skills by accurately managing a fund and official files as administrative manager.
- Coordinated with our executive members to promote academic resources such as Open House, Resume Critique, and Midterm Kit.
- Exercised strategized marketing and coordinated logistics while promoting academic resources for the greater Kitchener-Waterloo community.
- Demonstrated creativity and dedication by providing innovative suggestions and critical feedback at weekly committee meetings.

Project Manager

September 2021 - May 2022

National Honour Society

South Korea

- Conducted a project of sending Christmas presents to children in Mongolia by cooperating with an organization called **Samaritan's Purse** as a member of **National Honour Society** of my school.
- Collected presents from **12** classes in the school and sent **100** boxes to children in Mongolia, specifically to the ones who are in need.

EDUCATION

University of Waterloo

September 2023 - April 2028

Bachelor of Mathematics in Data Science

Waterloo, ON

Relevant Coursework: Object-Oriented Programming, Algorithm Design, Statistics, Linear Algebra

Scholarship: President's Scholarship of Distinction - \$2,000 scholarship for students with average over 95%

Extracurriculars: AKCSE Executive Member, Soccer Intramurals