Alex Lee

Waterloo, Canada | a55lee@uwaterloo.ca | LinkedIn | GitHub | Portfolio

SKILLS

Languages: Python, Java, C/C++, C#, R, SQL, Bash, Typescript, Javascript
Frameworks/Libraries: Pandas, Matplotlib, NumPy, SciKit, TensorFlow, OpenCV, Selenium, Express, React
Tools: MySQL, MongoDB, PowerBI, Git, Linux, AWS, Make

EXPERIENCE

Data Analyst   May 2025 - August 2025
Daechitop English Institute
- Boosted average test scores by **12%** by designing **PowerBI** dashboards and conducting exploratory analysis built from cleaned and normalized student performance schema in **Excel**.
- Reduced repetitive work time by **75% (3x)** by developing automation tools using **Excel VBA** and **PyAutoGUI**, and enabled instructors to focus on personalized teaching.
- Delivered **data-driven insights** through statistical modeling and efficient data pipelines, which instructors used to design and offer an adaptive education system that maximized study efficiency.

Database Developer   January 2025 - April 2025
AKCSE   *Waterloo, ON*
- Led the development of official AKCSE website using **Express** and **MongoDB**, improving accessibility to career and academic help resources for University of Waterloo students.
- Optimized query efficiency and database scalability by **300%** through implementation of **dynamic CRUD**, while implementing **authentication** and access control features to strengthen data security.
- Increased event participation by **150%** by demonstrating quality teamwork and leadership by collaborating with a team of **5**, focusing on specialization to deliver higher quality outcomes.

Finance Analyst   September 2024 - December 2024
AKCSE   *Waterloo, ON*
- Conveyed accountability and organization skills by analyzing and managing the cash flow of **$1,000+** annual income and expenses using **Excel** and improved reporting accuracy by **10%**.
- Coordinated with executive members to exercise strategized marketing while promoting academic resources such as Open House, and Resume Critique for the greater Kitchener-Waterloo community.
- Reduced **10%** of unnecessary expenditures by writing annual financial reports to identify inefficiencies and recommending actionable strategies for better financial management of the organization.

PROJECTS

FBREF Football Data Analysis | *Pandas, Matplotlib, PowerBI, Selenium* | GitHub
- Collected **100,000+** football match data using **Selenium** and cleaned raw datas into a **Pandas DataFrame**.
- Performed exploratory analysis using **matplotlib** and **PowerBI** to visualize findings interactively and intuitively.
- Identified progress passing distance as key predictor of math results, suggesting focused strategies to teams.

Academic Management System | *Spring, Javascript, HTML/CSS, Bootstrap, MySQL, EC2* | GitHub
- Built a full-stack academic management web app of **20+** pages with **50+** users using **Spring** and **MySQL**.
- Ensured reliability with **200+** test cases and resolved issues such as multiple PK, time zone mismatches, etc.
- Facilitated grades management with **20+** essential features, CRUD operations, real-time chat, and custom filters.
- Reduced query response time by **30%** using nested SELECT statements to handle grouped ID increments.

Biquadris Game | *C++, X-Window* | GitHub
- Led a team of three to develop a Biquadris game, non-real time Tetris game, using **C++** with OOP design.
- 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 reliability to reduce runtime errors during play sessions.

EDUCATION

University of Waterloo   September 2023 - April 2028
Bachelor in Data Science, Minor in Combinatorics and Optimization

Relevant Coursework: Data Structures, Algorithm Design, Statistics, Sampling Design, Linear Algebra, OOP
Scholarship: President's Scholarship of Distinction - $2,000 scholarship for students with average over 95%