Alex Jiwon 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   *Seoul, Korea*
- Collected and cleaned student performance data using **Excel**; performed exploratory analysis to design and offer adaptive education system that maximizes study efficiency.
- Developed an automation tool using **Excel VBA** and **PyAutoGUI** to streamline repeated work, reducing working time by **75% (3x)** and enabling instructors to focus on personalized teaching.
- Generated **PowerBI** dashboards to deliver **data-driven insights** through statistical modeling and efficient data pipelines, and drove a **12%** increase in average test scores.

Database Developer   January 2025 - April 2025
Association of Korean Canadian Scientists and Engineers   *Waterloo, ON*
- Led the **team of 6** to develop the 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
Association of Korean Canadian Scientists and Engineers   *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 the **team of 16** 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

Credit Card Fraud Detection | *Jupyter Notebook, Pandas, Scikit-learn, Tensorflow* | GitHub
- Developed credit card fraud classification model using **sklearn** and **TensorFlow** with **96%** prediction accuracy.
- Collected **200,000+** transaction data and cleaned by reshaping and scaling to handle **imbalance dataset**.
- Utilized **Shallow Neural Network** as a prediction model, comparing **5** different models for optimal results.

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.
- 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%