

Sabrina Liu

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SKILLS

Coding/Analytics: SQL, Python, R, C, C++, Java, Racket, Linux, MIPS, HTML, CSS, Matlab

Visualization Tools: Tableau, Power BI, MS Excel, LaTeX, Jupyter Notebook

Data Skills: Data Cleaning, Data Preprocessing, Data Modeling, Data Visualization

Soft Skills: Teamwork, Detail Orientation, Data-Driven Strategy, Time Management, Organizational skill

EDUCATION

University of Waterloo

September 2020 - April 2025

Bachelor of Mathematics in Computational Mathematics, Minor in Computational Optimization; **Co-op** program

- **Courses:** Computers & Computer system; Object-Oriented Software Development; Logic & Computation; Data Types & Structures; Nonlinear Optimization; Statistics & Probability; Computational linear algebra
- **Awards:** President's School/Distinction Scholarship

WORK EXPERIENCE

TepaIOT

September 2023 - December 2023

Testing Engineering Intern

Shenzhen, China

- Submitted 80+ bugs on ZenTao and executed 1570+ testing cases for each version of CAM system
- Developed an automated testing platform using **Flask, Selenium, and Pytest**, enabling simultaneous execution of 160+ test cases, resulting in an 11% improvement in basic testing efficiency
- Utilized Navicat in **MySQL** to locate and modify essential test modules in the database. Demonstrated proficiency in **Linux (SSH)** commands for operations such as upgrades, mirroring, and asset locating
- Installed and utilized VMware virtual machines, configuring network segments as per test requirements
- Developed operational reports and presentations, condensing key metrics for management assessment; Possessed expertise in deep learning containerization, cloud-native solutions, and probe containerization

Zhuozhuo Technology Co., LTD

January 2023 - April 2023 & August 2021 - November 2021

Operation Intern

Chengdu, China

- Extracted and converted user data into CSV format, employing **SQL** to join and union for valuable insights.
- Addressed advanced mathematics questions, delivering feedback to students
- Applied **Search Engine Optimization** to enhance the search rank for the Camera Math Website
- Constructed a detailed question bank with comprehensive classification, collaborating with the operations team to analyze data and achieve a 13% increase in overall operational efficiency
- Developing operational reports and presentations, effectively condensing crucial metrics and performance indicators for management assessment

Xmaker

November 2019 - January 2020

Teaching Assistant

Chengdu, China

- Prepared learning material for **Laser cutter, 3D printers, and Scratch**, covering data cleaning and data visualization. Engaged in discussions, addressed inquiries during lab session
- Leveraged strong technical skills to guide students in mastering **Python, SQL, and R** for data analysis, providing personalized assistance and fostering confidence in practical application, while conducting assessments to critical thinking and seamlessly integrating industry trends for enhanced practical insights.

PROJECT EXPERIENCE

Data Analysis

September 2023 - December 2023

- **COVID-19 DATA ANALYSIS:** Conducted in-depth **SQL** data exploration, utilizing advanced querying techniques, and crafted impactful **Tableau** visualizations to distill complex data into actionable insights.
- **BIKE SALES ANALYSIS:** Conducted meticulous data cleaning in **Excel** and crafted a comprehensive dashboard, merging data cleaning expertise and visualization skills for informed decision-making.
- **APOCALYPSE DATA VISUALIZATION:** Built a dynamic **Power BI** dashboard with a survey breakdown.
- **AIRBNB DATA VISUALIZATION:** Developed an **Tableau** dashboard featuring an interactive map
- **WEBSITE DATA HARVEST:** Implemented a **Python-based** project for encompassing web scraping on Wikipedia and the automation of API pulls from a cryptocurrency website
- **MOVIE DATA CORRELATION:** Incorporated data cleaning and explored variable correlations by **Python**

Other projects (github: <https://github.com/SabrinaLiuYing>)

September 2021- December 2023

- **PYTHON:** BMI; ADT Pixel Square; Ordered Tree
- **MATLAB:** PED Noise; Heat Flow Modeling
- **R:** QQ Plot; Histogram; Density; List; CDF
- **C++:** Hydra; Sum Heap; Mastermind; Bash
- **C:** Balanced BST; Minesweeper;
- **CSS/HTML:** Personal CV website