

# 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

- **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
- Built a **Tableau** dashboard to visualize asserts information for testing visual board on the platform
- 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.
- **DATA SURVEY VISULIZATION:** Built a **Power BI** dashboard with a professional 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 Denoise; 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