

# Qun Li

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## EDUCATION

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### University of Toronto

Toronto, Canada

*Bachelor of Science in Applied Statistics and Applied Mathematics*

*Expected Jun. 2027*

- Year GPA: 3.3/4.0. Relevant Coursework: Data Structures and Analysis, Systems Programming, Software Design, Databases, Algorithm Design, Machine Learning, Artificial Intelligence, Software Tools and Testing

## EXPERIENCE

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### Math Instructor (Part-Time)

Sep. 2025 – Oct. 2025

*Kumon Learning Centre*

*Toronto*

- Provided 1:1 tutoring on multi-step math questions by modeling full solutions, checking student work line-by-line, and explaining why each step works, with extra practice on algebra, fractions, and word problems to build consistency
- Reviewed and graded daily assignments to identify recurring error patterns, track learning gaps across topics, and adjust pacing with targeted worksheets, ensuring students practiced the exact skills they struggled with most

### Math Tutor

Dec. 2024 – Apr. 2025

*Self*

*Toronto*

- Tutored students weekly on Euclid contest material including algebra, geometry, and number theory, creating focused practice plans and teaching reusable solution patterns that students could apply confidently to unfamiliar questions
- Designed mock tests and feedback cycles to improve speed and accuracy, reviewing mistakes by category and explaining cleaner approaches, helping all students reach Top 25% Distinction in the Euclid Contest across Canada

## PROJECTS

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### SQL AI Agent | *FastAPI, LangChain, PostgreSQL, SQLAlchemy, Docker*

Dec. 2025

- Built a **ChatGPT-style assistant** for SQL databases where users ask questions in English, the system generates executable SQL, queries PostgreSQL, and returns both an answer and raw SQL results for verification and debugging
- Implemented a **FastAPI REST service** with persistent chat memory, packaged PostgreSQL in Docker so setup stays consistent and runs remain reproducible for local development and testing across different environments

### API Automation Testing | *FastAPI, Docker, Jenkins*

Nov. 2025

- Built a **CI-driven** FastAPI testing platform integrated with Docker and Jenkins, running Excel-defined API test cases per build, capturing outcomes, and generating HTML/Excel reports for review after each pipeline run
- Implemented a regression workflow mapping business scenarios to **API calls** and expected status codes, helping validate backend changes faster, catch breaking updates earlier, and reduce manual retesting iterations

### House Price Prediction | *XGBoost, Optuna, Scikit-Learn, FastAPI, Docker*

Oct. 2025

- Built an end-to-end **ML pipeline** using XGBoost with Optuna tuning inside a scikit-learn workflow, improving performance through preprocessing and model selection, and ranking **Top 2%** among 5,000+ Kaggle participants
- Deployed the model as a FastAPI REST service, containerized with **Docker** and shipped through Render using GitHub auto-deploy, making releases repeatable and enabling updates when the pipeline or model version changes

### Walmart Sales Analysis | *Pandas, PostgreSQL, SQL*

Aug. 2025

- Built an analytics workflow on the Walmart Sales Dataset (100k+ rows), cleaning and preprocessing records in **Pandas**, standardizing fields, and loading structured tables into PostgreSQL to support querying and reporting
- Wrote SQL with aggregation and window functions to analyze branch performance, revenue trends, customer behavior, and payment-method patterns, answering business questions like peak periods, top categories, and changes

## TECHNICAL SKILLS

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**Languages:** Python, Ruby, JavaScript, TypeScript, Java, SQL (PostgreSQL)

**Frameworks & Platforms:** FastAPI, Ruby on Rails, React, Node.js, LangChain, LangGraph, Spring AI, REST API

**Developer Tools & Infrastructure:** Linux, Git, Docker, Jenkins, Redis, PostgreSQL

**Data & AI Libraries / Techniques:** pandas, NumPy, Scikit-learn, XGBoost, Optuna, RAG, Prompt Engineering

**Concepts:** Software Engineering, System Design, Full-Stack, Backend, Frontend, Cloud Infrastructure, Data Structures and Algorithms, CI/CD Pipeline, Agile Methodologies, Web Development, Database, HTTP Protocols, Product Design