

Yiyi Xu

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EDUCATION

University of Toronto — Faculty of Applied Science and Engineering

Toronto, ON

B.A.Sc. in Engineering Science + PEY Co-op

Expected Graduation: April 2027

- **GPA:** 3.60/4.0, Dean's Honours List
- **Activities:** Phi Gamma Delta Fraternity, Div 1 Intramural Volleyball, UTMUN Director, St George Capital Project Lead
- **Relevant Coursework:** Data Structures & Algorithms, Digital & Computer Systems, Linear Algebra, Probability & Statistics, Ordinary Differential Equations, Engineering & Society, Praxis (Engineering Design)

EXPERIENCES

PwC (Advisory)

June 2024 – August 2024

AI & Data Consulting Intern | PowerPoint, Excel, Python, SQL

Shanghai, China

- Prototyped an in-house BI software using Python and MySQL, achieving up to 15% reduction in data retrieval time and researching Chinese LLMs (ChatGLM, Baidu, Alibaba, Tencent) to identify the most suitable model for integration
- Developed a bidding proposal for Pfizer China to migrate patient data in compliance with PIPL regulations, conducting research on MDM and Data Lake software, designing system architecture diagrams, and optimizing the handling of 1,000,000+ user entries, 20,000+ hospital records, and 750,000+ doctor profiles
- Authored comprehensive project handoff documentation for a data valuation tool designed to evaluate the monetary value of datasets exceeding ¥1,000,000+ RMB in value including Preliminary Acceptance Plan, Requirements Specification, and Training Plan to streamline user onboarding and ensure seamless tool adoption

First Robotics Competition Team 610

January 2022 - April 2023

Head of Strategy, Robotics Software Engineer | Java, GitHub, Excel

Toronto, ON

- Won international finalists' award at the FIRST World Championship
- Led a 35+ member team as Head of Strategy, building a robot for the First Robotics Competition (2022-2023), managing Alliance Selection, match strategies, and scouting collaboration
- Programmed 5 robot subsystems, including game object manipulators, drivetrain, and vision using Java and WPILib, applying Object-Oriented Programming principles to create singleton pattern code for real-time control
- Developed 30+ commands and optimized 8+ autonomous routines by implementing PID control and integrating sensors, utilizing OOP for efficient process handling and decision-making logic within the robot's control framework

PROJECTS

Financial Modeling Case Competition | Python, PowerPoint

January 2025

- Achieved 16% profits, highest among 14 competing teams
- Co-created a trading algorithm employing rolling volatility measures and RSI momentum strategies to optimize portfolio allocation by identifying short-term volatility events and leveraging strategic entry/exit points

Image Resizing Algorithm (Seam Carving) | C, GitHub

January 2024

- Implemented a seam carving algorithm in C for content-aware image resizing, using gradient energy calculation and dynamic programming to identify and remove optimal seams
- Optimized memory management and image processing with efficient pointer handling, binary file manipulation, and iterative seam removal for adaptive resizing

Housing Proximity to Amenities in the US | Python, ArcGIS, LaTeX

October 2022 - January 2023

- Won 1st place out of 160 teams in a national Big Data Challenge and submitted for publication
- Spearheaded data collection by simple random sampling 163 counties from 1,936 available on [OpenAddresses](#) and stratified random sampling 1,630 unique addresses to enable analysis of housing proximity to amenities with educational attainment and demographic relationships
- Co-authored a statistics research paper in LaTeX on the topic and presented to sustainable development experts and government officials

SKILLS

Programming Languages: Python, Java, C, JavaScript, MATLAB, SQL, SystemVerilog, RISC-V, R Studio

Technologies: Git, Bash, React, React Native, Pandas, Matplotlib, Numpy, Streamlit

Applications: MS Office Suite (Word, Excel, PowerPoint, Teams, PowerBI), Google Suite, Autodesk Fusion 360, SolidWorks, OnShape, LaTeX

Spoken Languages: English, Mandarin, Shanghainese

Interests: GTO Poker, Volleyball, NBA, Formula 1, DJing