

Joey Yizhi Li

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Education

University of Toronto

Sept 2024 – May 2029

BASc in Engineering Science

- **cGPA:** 3.92, 2 times Dean's Honours List
- **Coursework:** Calculus (98), Electrical Circuits (100), Structures and Materials (98), Computer Algorithm (100)

Research and Projects

Test Migration Across Mobile Apps Based on Conversational Large Language Model | [ChaGration](#)

Jan 2023-Dec 2023

- Developed CHAGRATION for **App Test Migration** with a partner in the Aspiring Explorers in Science (AXiS) research program hosted by Tencent
- Guided by Prof. Tao Xie (H-index 81, 23156 citations) and Ph.D. student Dezhi Ran from **Peking University**
- Used LLM's ability to compare semantic similarity between different UI elements through **Prompt Engineering**
- Reached **an accuracy of 90%** and **an average runtime of 3 minutes**; much more efficient and effective than previous works
- Tools Used: OpenAI's API client, Android Emulator, Appium 2.0, ADB, Python

LeSort: An Automated Lego Sorting Machine | [LeSort](#)

Feb 2025-Apr 2025

- Developed an automated Lego sorting machine that can sort Lego by its size, color, or type
- Utilized an online CVML model that allows customization of sorting strategy; Includes a GUI that sends real-time feedback
- Reached an accuracy of 90% and an average sort time of 3.5 seconds, drastically decreased the manual sorting effort
- Tools Used: OpenCV2, Tkinter, Threading, Onshape, Arduino

Analysis of Soccer Scoring Probability with respect to Shooting Location

Oct 2023-Jan 2024

- Utilized **Logistic Regression, Math Modeling, and Analytic Geometry** to fit the real-world shooting data of the top 5 League
- Selected Shooting Event from Wyscout dataset using **Pandas** in Python
- Tools Used: Python, MATLAB

Experience

Math Modeling Club President

Shanghai High School International Division

Shanghai, China

June 2023 – June 2024

- Largest school STEM club, over 90 members
- Math Modeling related lecture; Provided guidance and feedback to beginners; Held mock competition
- Created the best result in high school math modeling competitions (1 Outstanding, 3 Finalists) in school history

Honors

Canadian Math Olympiad (CMO) Participant

Oct 2023-Feb 2024

- Scored 71/80 in Canadian Open Math Challenge 2023, placing among the top 50 in Canada; **CMO Participant**

USA Math Olympiad (USAMO) Qualifier

Nov 2022-Feb 2023

- AMC12B Scored 129/150 and Awarded DHR (Top 1%); AIME Scored 12/15; **USAMO Qualifier**

Canadian Computing Contest (CCC) Senior Division

Feb 2024

- Scored 53/75, Rank 67/3948; Received Honor Roll

High School Mathematical Contest in Modeling Finalist (Top 6%)

Nov 2021

- Spent 14 days with a team writing a 20-page paper exploring the best battery type to sustain an off-grid house

Technical Skills

Languages: Python, Java, C/C++, MATLAB

Technologies: STATA, Linux, Android Studio, Appium, Git, CAD