

Yulong Liu

🏠 yulong.me

✉ yulo.liu@mail.utoronto.ca

📄 [liuyulo](#)

🔗 [liuyulo](#)

Research Interests

I am broadly interested in programming language theory and foundations of mathematics. My long-term goal is to understand the connection between mathematics and computation. To that end, I have studied dependent types, mathematical logic, and set theory advised by professors in these areas. I also wrote expository papers and gave seminar talks on the theory of computation and type systems. Currently I am doing a research project on reasoning about parallel effect handlers.

Education

Honours B.Sc. Specialist in Computer Science and Major in Mathematics

2021 ~ Present

University of Toronto, Toronto, Canada

- Dean's List awardee for 2022 and 2023
- Computer and Mathematical Sciences Teaching Assistant Award
- High distinction with GPA 3.90/4.00

Professional Experience

Research Assistant

May 2024 ~ Present

University of Toronto, Toronto, Canada

- “Reason About Computational Effects” advised by Professor [Ningning Xie](#)
- University of Toronto Excellence Awards (UTEA) with \$7500 stipend

Teaching Assistant

Jan 2023 ~ Present

University of Toronto Scarborough (UTSC), Toronto, Canada

- Principles of Programming Languages (Winter 2024)
- Theory of Computation (Summer 2023, Fall 2023, Summer 2024)
- Discrete Mathematics (Winter 2023)

Guest Lecturer

Jun 2023 ~ May 2024

University of Toronto Scarborough (UTSC), Toronto, Canada

- Introduction to Deterministic Finite State Automata (Summer 2023)
- Closure Properties of Regular Languages using State Machines (Summer 2023)
- Introduction to Propositional Logic (Fall 2023)
- Program Correctness for Iterative Programs (Summer 2024)

Full Stack Developer

Sep 2022 ~ Jan 2023

Health Canada, Toronto, Canada

- Food Directorate, The Bureau of Food Surveillance and Science Integration

Papers & Talks

[A Computational Approach to String Figures](#)

Nov 2023

Yulong Liu, *UTSC Computer and Mathematical Sciences Undergraduate Seminar*

[Safe Code Generation: Metaprogramming with Type Theory](#)

Oct 2023

Yulong Liu, Youzhang Sun, *UTSC Computer and Mathematical Sciences Research Symposium*

[Introduction to Staged Compilation and Two-Level Type Theory](#)

Aug 2023

Yulong Liu, Youzhang Sun

[A Parsimonious Approach to Pushdown Automata](#)

Sep 2023

Yulong Liu, *U(t)-Mathazine*