

Zhengyu Brian Li

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EDUCATION

Georgia Institute of Technology <i>PhD in Computer Science - Advisor: Vijay Ganesh</i>	Expected 2023 - 2028 GPA: 4.0
University of Waterloo <i>Master of Mathematics in Computational Mathematics</i>	2022 - 2023 GPA: 3.7
University of Toronto <i>Honour Bachelor of Science in Mathematics</i>	2018 - 2022 GPA: 3.6

WORK EXPERIENCE

Machine Learning Research Intern <i>Phenomic AI</i>	May 2023 – September 2023 Toronto, Canada
<ul style="list-style-type: none">Led a project to enhance spatial gene expression analysis using deep learning techniques, demonstrating improvements over traditional methods in both accuracy and efficiency.Adapted and applied principles from ControlNet and GAN architectures to develop machine learning algorithms, improving spatial transcriptomics data interpretation and advancing automated cell-type labeling.	
Data Science and Advanced Analytics Intern <i>TD Insurance</i>	May 2022 – September 2022 Toronto, Canada
<ul style="list-style-type: none">Developed and implemented a sophisticated predictive model using machine learning and PCA on large-scale customer data, improving service efficiency by 40%, while optimizing the data pipeline to increase decision-making reliability by 80%.Conducted in-depth analysis of customer satisfaction data, presenting key insights to executives that informed strategic initiatives, resulting in a 60% increase in customer satisfaction rates as measured by follow-up surveys.	

TEACHING AND EXTRACURRICULARS

Teaching Assistant <i>Georgia Tech, University of Toronto, University of Waterloo</i>	September 2020 – September 2024 Toronto, Canada
<ul style="list-style-type: none">Conducted teaching responsibility for Artificial Intelligence (Georgia Tech), Algebra (Waterloo), Graph theory and combinatorics (Toronto), etc.	
President <i>University of Toronto Society of Mathematics and Computational Sciences</i>	May 2020 – April 2022 Toronto, Canada
<ul style="list-style-type: none">Led a 20-person team in executing large-scale events (1000+ participants), including Toronto's major Hackathon, while negotiating partnerships with 80+ organizations, resulting in 90% job offer rate for attendees, 25% membership growth, and 50% cost reduction through data-driven strategy.	
Founding President <i>University of Toronto Society for Algorithmic Modelling</i>	May 2019 – April 2021 Toronto, Canada
<ul style="list-style-type: none">Founded and led the Society for Algorithmic Modelling (UTMSAM) as President, growing membership to 1000+ students in one year through innovative initiatives in data science, machine learning, and applied mathematics; managed a team of 10 executives to organize workshops, seminars, and conferences.	

NOTABLE PUBLICATIONS

Li, Z., et al. (2024). "A SAT Solver + Computer Algebra Attack on the Minimum Kochen–Specker Problem." *Accepted to IJCAI 2024 (15% acceptance rate).*

Conor, D., Li, Z., et al. (2024). "A SAT Solver + Computer Algebra Attack on the Minimum Kochen–Specker Problem." *Accepted to AAAI 2024.*

Conor, D., Li, Z., Bright, C., Ganesh, V., (2024). "A SAT + Computer Algebra System Verification of the Ramsey Problem $R(3, 8)$." *Accepted to AAAI 2024.*

Shi, B., Patel, M., Yu, D., Yan, J., Li, Z., Petriw, D., ... & Howe, J. Y. (2022). "Automatic quantification and classification of microplastics in scanning electron micrographs via deep learning." **Science of The Total Environment**