

Michael S. Truong

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EDUCATION

Ph.D. in Psychology (<i>Quantitative Methods</i>)	2022 - Present
York University	
Supervisor: <i>Dr. David B. Flora</i>	
M.A. in Psychology (<i>Developmental Sciences</i>)	2022
York University	
Supervisors: <i>Drs. Thanujeni Pathman & W. Dale Stevens</i>	
Thesis: <i>Transfer Success on the Linda Problem: A Re-Examination Using Dual Process Theory, Learning Material Characteristics, and Individual Differences</i>	
H.B.Sc in Neuroscience & Psychology	2020
University of Toronto	
Supervisor: <i>Dr. Morris Moscovitch</i>	
Project: <i>Temporal Order & Associative Memory</i>	
A.R.C.T in Piano Performance	2015
Associate of The Royal Conservatory of Music Toronto	

AWARDS AND SCHOLARSHIPS

2025	York Conference Travel Fund	\$500
2025	SSHRC Doctoral Award	\$80,000
2025	Ontario Graduate Scholarship (Declined)	\$15,000
2024	Mirka Ondrak Award	NA
2024	York Conference Travel Fund	\$500
2024	Ontario Graduate Scholarship	\$15,000
2024	York Academic Excellence Fund	\$1200
2023	Canadian Psychological Association: Quantitative Methods Student Presentation Award	NA
2023	York Academic Excellence Fund	\$158
2022	Ontario Graduate Scholarship	\$15,000
2021	Certificate of Teaching Excellence Nominee (CCDP)	NA
2021	York Research Cost Fund	\$1,600
2021	York Academic Excellence Fund	\$2,000
2017-2020	Dean's List Scholar	NA
2020	Master's Training Scholarship (VISTA)	\$20,000
2019	James Morrow Scholarship	\$1,000
2018	Gordon Westaway Hilborn Scholarship	\$1,000
2016	University of Toronto Entrance Scholarship	\$2,000

PROFESSIONAL & RESEARCH EXPERIENCE

Doctoral Student

2022 - Present

York University

Supervisor: *Dr. David B. Flora*

- Reviewed literature on the synthesis of machine learning and structural equation modelling
- Implementing this synthesis (IGSCA Trees) in the R *cSEM* package
- Conducting a Monte Carlo simulation study to investigate the frequentist properties of IGSCA Trees
- Collaborating with field experts (Drs. Ji Yeh Choi and Florian Schuberth)
- Presented and shared research findings at scientific conferences

Research Assistant

2024

York University

Supervisors: *Dr. Michael Friendly*

- Reviewed and commented on Dr. Friendly's textbook on Multivariate Linear Models for both typographical and technical content.
- Recommended elaborations, additions, and omissions.

R Library Contributor

2023 - Present

[cSEM R Package](#)

- Revising library documentation
- Updated copyleft licensing to match latest standards
- Added Docker to facilitate computational reproducibility between developers
- Implemented Integrated Generalised Structured Component Analysis Trees
- Updated test infrastructure
- Harmonizing GSCA with cSEM infrastructure
- Improved UX with tidy-style *broom* methods

Statistical Consultant

2023 - Present

York University

[Statistical Consulting Service](#)

Master's Student

2020 - 2022

York University

Supervisors: *Drs. Thanujeni Pathman & W. Dale Stevens*

- Analyzed behavioral data from a cognitive neuroscience project on neurofeedback training collected in partnership with an industry collaborator
- Proposed and led a large online behavioral study examining the relationship between decision-making and memory using PsychoJS, Qualtrics and Prolific (N=527)
- Won additional funding to compensate participants for my online study

Teaching Assistant

2020 - Present

York University

- PSYC6132: Univariate Analysis II: Regression
- PSYC3430: Behaviour in Groups
- PSYC2260: Cognition
- PSYC2240: Biological Basis of Behaviour
- PSYC2130: Personality
- PSYC2030: Introduction to Research Methods
- PSYC1010: Introduction to Psychology

Research Assistant

2019 - 2020

Human Neuropsychology & Cognitive Science Lab

University of Toronto

Supervisors: *Dr. Morris Moscovitch & Nichole Bouffard*

- *Paid Research Assistant (Summer 2020)*
- *PSY406Y1: Spatial and Temporal Order in Associative Memory (Fall/Winter 2019 - 2020)*
- *PSY405H1: Temporal Order and Associative Memory (Summer 2019)*

- Surveyed extant literature on temporal-based mnemonic strategies
- Programmed counter-balanced cognitive psychology experiment with randomized stimuli in E-Prime and PsychoPy/PsychoJS
- Collected data, performed data analyses in R and programmed a Lag-CRP & SRP graph generator in R

Research Assistant

2018 - 2019

Physiological Mechanisms of Memory in Health and Disease Lab

University of Toronto

Supervisors: *Dr. Kaori Takehara-Nishiuchi & Maryna Pilkiw*

PUBLICATIONS

What if Cluster Size is the Confound in Multilevel Models

Under-Review

Truong MS., Zhang X., & Flora D.B.

Transfer of Learning to the Linda Problem Re-Examined: Explicit Versus Implicit Training Effects and Individual Differences as Predictors

Under-Review

Truong MS., Pathman T., Stevens WD., & Toplak M.

PRESENTATIONS, WORKSHOPS & POSTERS

Reply to Paul E. Meehl: Machine Learning Structural Equation Modeling and Falsificatory Data Analysis

2025

York University Quantitative Methods Area Forum

Truong MS.

What Happens When Sample Size is the Confound in a Multilevel Model?

2025

International Meeting of the Psychometrics Society 2025 Oral Presentation

Truong MS., Zhang, X., & Flora, DB.

What Happens When Sample Size is the Confound in a Multilevel Model?

2025

York University Quantitative Methods Area Forum

Truong MS., Zhang, X., & Flora, DB.

Machine Learning Structural Equation Modeling and Falsificatory Data Analysis

2024

Canadian Psychological Association 2024 12-Minute Talk

Truong MS. & Choi JY.

Machine Learning Structural Equation Modeling and Falsificatory Data Analysis

2024

Modern Modeling Methods 2024 30-Minute Talk

Truong MS. & Choi JY.

- Planting Decision Trees: Human-Friendly Interpretation of Monte Carlo Simulations, Multiverse Analyses and Multivariate Posterior Distributions** 2024
Canadian Psychological Association 2024 Conference Poster
Truong MS., Crone G., Alter, U., & Choi JY.
- Planting Decision Trees: Human-Friendly Interpretation of Monte Carlo Simulations, Multiverse Analyses and Multivariate Posterior Distributions** 2024
Modern Modeling Methods 2024 Conference Poster
Truong MS., Crone G., Alter, U., & Choi JY.
- Regarding the Art and Science of Psychology: Psychometric Networks** 2024
York University Quantitative Methods Area Forum
Truong MS.
- Applications of Psychometric Networks** 2024
Statistical Consulting Service Seminar Presentation
Truong MS.
- Code Quality and Computational Reproducibility** 2024
Statistical Consulting Service Seminar Presentation
Truong MS.
- Chapter 16 (and 17) of McElreath's Statistical Rethinking 2E** 2023
Statistical Consulting Service Seminar Presentation
Summarised seminar readings
Led seminar discussion with questions for discussion and actively encouraged participation from attendees
Truong MS.
- Analyzing Data with R: How Much do my Findings Depend on my Analytical Decisions?** 2023
R workshop introducing the R multiverse and targets package for advancing scientific research
11 Attendees
York University Quantitative Methods Workshop Series
Truong MS.
- Leveraging Machine Learning within a Structural Equation Modelling Context for the Development and Testing of Theories** 2023
12-Minute Talk – CPA2023 Annual National Convention
Truong MS. & Choi JY.
- Summary and Reflection - A 2-part talk on my MA study where I studied the effects of learning on inhibiting biases** 2022
York University Quantitative Methods Area Forum
Truong MS.
- Does Visualizing Logical Relationships Help Inhibit Biased Judgments?** 2022
CVR-VISTA Conference Poster
Truong MS., Pathman T., & Stevens WD.

PSYC2260 - Cognition: Guest Lecture on Reverse Inference in Neuroimaging & 2021 Autobiographical Memory

Course Instructor: *Dr. Agnieszka Kopinska*

TECHNICAL SKILLS

Programming	MATLAB, Julia, C++, Stan, Bash, L ^A T _E X, Quarto, R Markdown, Python, Advanced R
Statistics	Mixed-Effects/Multilevel Modeling, Monte Carlo Simulation Studies, Structural Equation Modeling, Categorical Data Analysis, Machine Learning, Computational Statistics, Longitudinal Data Analysis, Network Psychometrics
System Administration & Data Engineering	Wireguard VPN, Git, Singularity/Docker, Slurm, Arrow, duckdb, Linux
Stimulus Presentation	E-Prime, PsychoPy/PsychoJS
Online Studies & Surveys	Prolific, Qualtrics

COMMUNITY SERVICE

Tenure Review Committee 2024

- Reviewed and voted on tenure-track professor's tenure application as a student member.

Open Science Reviewer 2022 - Present

- Scrutinized open datasets and communicated problems to authors
- [Neurocognitive aging data release with behavioral, structural and multi-echo functional MRI measures](#)
- [Mental Health and Social Contact During the COVID-19 Pandemic: An Ecological Momentary Assessment Study](#)

Sick Kids Child Life Volunteer (~ 200 hours) 2024 - Present

Canadian Psychological Association Quantitative Methods Section Abstract Reviewer 2023

- Reviewed and rated submitted abstracts for the CPA2024 Ottawa Convention

Food Bank Volunteer Lead (~ 150 hours) 2022 - Present

- Introduced and guided new community and corporate volunteers on food sorting
- Organized activities based on organizational priorities and food safety concerns
- Ensured safe and continued food sorting activities

EXTRACURRICULAR ACTIVITIES

Psychology Graduate Student Association Research Symposium Chair, Psychology Graduate Student Association 2024 - 2025

- Organized and led graduate student members to organize a research symposium with two keynote speakers

Psychology Department Representative & Treasurer, Psychology Graduate Student Association 2023 - 2024

- Attended department meetings and disseminated discussions concerning graduate students to the graduate student body
- Managed graduate student association finances

Mentor, Psychology Undergraduate Mentorship Program (<i>40 hours</i>)	2020 - Present
<ul style="list-style-type: none"> • Attended workshops and helped inform students on attending graduate school as a panelist • Mentored several undergraduate students on career progression 	
Secretary, Psychology Graduate Student Association	2020 - 2021
<ul style="list-style-type: none"> • Created and distributed minutes at every meeting 	

PROFESSIONAL DEVELOPMENT

Cognitive Diagnosis Models: Theory and Applications in R	2025
Network Winter School 2024	2024