# Quynh P. Vu

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Gainesville, FL, USA

**EDUCATION** 

## University of Florida

Ph.D., Statistics Aug. 2024 – Present

Main coursework: theoretical statistics, regression analysis, statistical inference, computational statistics and optimization.

# **University of Toronto**

Toronto, ON, Canada M.Sc., Statistics Sept. 2022 – Apr. 2023

Main coursework: probability theory, mathematical statistics, applied statistics, probabilistic machine learning, and statistical consulting.

#### York University

Toronto, ON, Canada

Specialized Honours BA., Statistics

Sept. 2018 - Dec. 2021

First Class with Distinction

Main coursework: differential and integral calculus, linear algebra, real analysis, stochastic processes, numerical methods, ordinary and partial differential equations, programming (Python, MATLAB, R)

RESEARCH **EXPERIENCE** 

#### **University of Toronto**

Mississauga, ON, Canada

Department of Mathematical and Computation Sciences

Research Assistant. Advisor: Professor Luai Al Labadi Jun. 2023 – Apr. 2024 Developed a Bayesian non-parametric model validation framework for rightcensored data based on Kullback-Leibler divergence and the Beta-Stacy processes.

## York University

Toronto, ON, Canada

Department of Mathematics and Statistics

May 2021 - Aug. 2021 Research Assistant. Advisor: Professor Iain Moyles Performed agent-based modeling to study the effects of antiviral pharmaceutical or non-pharmaceutical interventions on mitigating aerial and surface transmissions of COVID-19 pathogens.

#### York University

Toronto, ON, Canada

Department of Mathematics and Statistics

Research Assistant. Advisor: Professor Neal Madras May 2020 - Aug. 2020 Constructed Markov chains for the 4321 and 321 pattern-avoiding affine permutations under periodic boundary conditions and conducted simulation experiments to validate the initial conjectures about the undistorted parallelism and the weak convergence limits of these classes of monotone-decreasing affine permutations.

# OTHER WORK EXPERIENCE

**Data Sciences Institute @ University of Toronto** Toronto, ON, Canada Consultant. Advisor: Professor Samantha-Jo Caetano Jan. 2023 – Dec. 2023 Provided statistical advice to fellows and collaborators in other social and physical science disciplines on the appropriate statistical analysis approach to each respective project.

INFORMED VIETNAM - VMED GROUP Ho Chi Minh City, Vietnam Heath Data Analyst Intern Jan. 2022 – Aug.2022 Responsible for collecting electronic health records (EHRs) from case histories of patients in public hospitals located in Ho Chi Minh City and Hanoi (Vietnam) and executing analyses of patients' vital signs (pulse and respiration rates, blood pressure, and oxygen saturation levels) to establish a health index that measures risk factors for metabolic syndrome.

# PUBLICATIONS AND PREPRINTS

L. Labadi, Q. Vu. Kullback-Leibler divergence-based Model Validation for Right-Censored Data: Insights from Bayesian Non-parametric Methods – to be submitted in 2024

N.Madras, J. Troyka. (2021). Combinatorics Bounded Affine Permutations II. Avoidance of Decreasing Patterns, In *Annals of Combinatorics*, 2021.

HONORS AN	D
AWARDS	

University of Florida Graduate School Fellowship	2024-2025
Dean's Undergraduate Research Award, York University	2020 & 2021
Continuing Student Scholarship, York University	2019 & 2021
Member of Dean's Honour Roll, York University	2019 & 2021

# TALKS AND CONFERENCE ABSTRACTS

# **Invited talks**The Conundrum of COVID-19: The Case of Toronto

2023 Statistical Society of Canada (SSC) Annual Meeting May 2023 Stochastic modelling of COVID-19 transmission among visitors in theme parks 2021 Summer Undergraduate Research Aug. 2021

Canadian Undergraduate Mathematics Conference (CUMC) Aug. 2021

 $Bounded\ affine\ pattern-avoiding\ permutations$ 

2020 Summer Undergraduate Research Aug. 2020

TEACHING AND MENTORSHIP

University of Florida

Gainesville, FL, USA

Tacching Assistant STA 2022 Engineering Statistics

Fall 2024 Spring 2025

Teaching Assistant, STA3032 Engineering Statistics Fall 2024, Spring 2025

**University of Toronto** 

Toronto, ON, Canada

Teaching Assistant, STA304 Surveys & Sampling Fall 2022, Summer 2023
Teaching Assistant, STA255 Statistical Theory Winter 2023
Teaching Assistant, STA221 The Practice of Statistics Winter 2023
Mentor, ASA DataFest May 2023

York University Toronto, ON, Canada
Tutor, Math Kangaroo Winter 2020
Tutor, Excel Lassonde Fall 2018 – Winter 2019

# QUALIFICATIONS

# **Solfware and Programming**

Proficient in: Python (numpy, scikit-learn, pandas, PyTorch, TensorFlow, matplotlib), R & R Markdown (lme4, rstan, tidyverse, ggplot2, splines2), Stan, Git, and LaTeX.

Familiar with: SQL, C/C++

# MIT OpenCourseWare

6.036 Introduction to Machine Learning

# Languages

English (fluent), Vietnamese (native)

# Last Updated

December 17, 2024