

# Quentin FRUYTIER

Ph.D. Candidate

UT Austin

M.Sc. & B.Sc. Graduate

McGill University

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👤 [Personal Website](#)

## Ph.D. Supervisors

[Aryan Mokhtari](#)

[Sujay Sanghavi](#)

## M.Sc. Supervisors

[Abbas Khalili](#)

[Tim Hoheisel](#)

## Programming Skills

Python (PyTorch & TensorFlow),  
C, C++, Matlab, and R.

## Languages

**Bilingual** French (native) and  
English

## Interests

Machine Learning  
Statistical Learning  
EM Algorithm

## Education

UT Austin • Ph.D. in Electrical Engineering • <b>***</b> /4.0 GPA	Expected 2028
McGill University • Masters in Mathematics • <b>4.0</b> /4.0 GPA	August 2023
McGill University • Joint Honours Math & Comp. Sci. • <b>3.8</b> /4.0 GPA	June 2021

## Research Experience

<b>M.Sc. Thesis on <a href="#">EM Algorithm</a></b>	Fall 2021-Summer 2023
Comprehensive review of the EM algorithm's local convergence properties to global or local optima. Study of the EM algorithm and its applications to mixture models. Empirical verification of asymptotic rates of convergence with variation in the signal to noise ratio.	
<b>Deep Learning for Traffic Prediction</b>	Winter 2021
Study of variants of <b>Graph Neural Networks</b> and <b>Recurrent Neural Networks</b> to capture the spatial and temporal dependencies of traffic data. Testing with <b>METR-LA</b> and <b>QTraffic</b> data sets. Implementation in <b>Python</b> with <b>TensorFlow</b> (GPU acceleration).	

## Work Experience

<b>Data Science Intern at Nectar</b>	Summer 2021
<i>Nectar Technologies Data Science</i>	
Prototyped supervised (RNN) and unsupervised (Auto-Encoder) machine learning models on sensor data collected from within beehives to predict hive health.	
<b>Software Engineer Intern at Akamai</b>	Summer 2020
<i>Akamai Technologies Image Manager</i>	
<b>Software Engineer Intern at Matrox</b>	Summer 2019
<i>Matrox Electronics Systems Ltd. Software Quality Assurance</i>	
	<i>Montreal, QC</i>

## Teaching Experience

<b>TA — Principles of Statistics 1</b>	Fall 2022
<i>McGill University Department of Mathematics and Statistics</i>	
	<i>Montreal, QC</i>
<b>TA — Calculus 2</b>	Winter 2022
<i>McGill University Department of Mathematics and Statistics</i>	
	<i>Montreal, QC</i>
<b>TA — Foundations of Programming (Python/Java)</b>	Fall & Winter 2019
<i>McGill University Department of Computer Science</i>	
	<i>Montreal, QC</i>

## Awards

<b>Basdall Gardner Memorial Graduate Fellowship in Engineering</b>	Feb 2023
UT Austin fellowship for academic excellence	
<b>Graduate Excellence Fellowship Award</b>	May 2022
McGill University award for academic excellence	
<b>Tomlinson Engagement Award for Mentoring</b>	April 2019
McGill University award for assistant teaching in undergraduate classes.	
<b>J W McConnell Scholarship</b>	March 2017
McGill University Major Renewable Entrance Scholarship .	