Anthony Coache

1257, Pierre-Floquet Street, Saint-Jean-sur-Richelieu, Québec, J2W 1X3

☐ +1 (514) 946-9661 • ✉ anthony.coache@gmail.com
🌐 anthonycoache.ca

Education

2017 – 2019 **M. Sc. in Mathematics, Concentration in Statistics** (GPA: 4.3/4.3)
Université du Québec à Montréal
Thesis: Stochastic Portfolio Optimization under Coherent Risk Measures (Advisor: Prof. François Watier).

2014 – 2017 **B. Sc. in Mathematics, Concentration in Statistics** (GPA: 4.18/4.3)
Graduated with Honours
Université du Québec à Montréal

Scholarships & Awards

2017 – 2018 **NSERC** [1] Alexander Graham Bell Master's Award (17 500$)
2017 – 2019 **FRQNT** [2] Master's Award (30 000$)
2017 **NSERC** Undergraduate Research Award (5 125$) + **FRQNT** Supplement (2 000$)
2016 **NSERC** Undergraduate Research Award (5 125$) + **FRQNT** Supplement (2 000$)
2015 – 2016 **Dean's Honour List** for Winter 2015, Fall 2015, Winter 2016 and Fall 2016 terms
2014 **UQAM Foundation** Admission Scholarship of the Faculty of Sciences (2 000$)

Research Interests

Stochastic modelling, computer science, optimization, applied statistics, machine learning.

Publications

Posters...

○ Binette, O. & **Coache, A.** The Significance of the Adjusted R Squared. (Bio)Statistics Research Day, Montréal. September 21, 2018.
○ **Coache, A.**, Larose, F. "Do schools kill creativity?" Well, they help analyse popularity! Annual Meeting of the SSC, Montréal. June 4, 2018.
○ Ferland, R., Froda, S., **Coache, A.** Comparison of surveillance flu data across regions. Annual Meeting of the SSC, Winnipeg. June 12, 2017.

Talks

Contributed...

○ *Probability and Statistics Student Seminar - UQAM:* Non-Parametric Estimation of the Quantile Function. Montréal. July 13, 2017.

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[1] Natural Sciences and Engineering Research Council of Canada
[2] Fonds de recherche du Québec – Nature et technologies

Work Experience

2016 – Present Teaching Assistant at Université du Québec à Montréal
Regression (STT2120), Statistical Software Laboratory (STT2100), Statistical Methods for the School of Management (MAT2080)
In charge of weekly exercises sessions for classrooms of 10 to 40 students.
- Fall 2018: STT2100 & MAT2080
- Winter 2018: STT2120 & MAT2080 (2x)
- Fall 2017: STT2100 & MAT2080
- Fall 2016: MAT2080

Summer 2017 Research Internship with Prof. François Watier
Stochastic Optimization with Convex Risk Measures.
Familiarized myself to stochastic optimization methods and analyzed the single-period portfolio optimization problem with convex risk measures. Investigated the multi-period portfolio optimization problem with convex risk measures.

Winter 2017 Mathematics Tutor
Quantitative Analysis in Psychology (PSY4031)
Preparation of lessons and weekly exercises sessions for individual tutoring.

Summer 2016 Research Internship with Prof. François Watier
Monte Carlo Evaluation of Sensitivities for Risk Measures.
Programmed Harrell-Davis and kernel density estimation algorithms and developed confidence intervals for risk measures and sensitivities. Joint work with Prof. René Ferland.

April 2016 Research Internship with Prof. Sorana Froda and Prof. René Ferland
Estimation of parameters from surveillance data on past epidemics.
Familiarized myself to epidemiology and programmed R and SAS scripts for data analysis and visualization. Led to a contribution in a poster.

Leadership

- Co-organizer of the Statistics Student Summit in Montréal (March 2019).
- Volunteered for the organization of the R in Montréal seminar (July 2018).
- Promoted the UQAM's Probability and Statistics Student Seminar (Summers of 2016 and 2017).
- Co-creator and main administrator of the Facebook page UQAM Statistics (September 2016). The goal of the page is to bring Statistics students together and keep them informed about upcoming events within the department.
- Co-organized orientation activities for new undergraduate students in Statistics (2016 – Present).

Skills

Programming: Strong knowledge of R, SAS, Matlab and TeX/LaTeX. Knowledge of C/C++, SQL, Java and Python.

Multitasking: Experience carrying out several projects in parallel from start to finish.

Versatility: Worked on multiple interdisciplinary projects related to statistics, mathematics, finance and epidemiology. Particular ease in creative work and fast learning.

Organization: Experience organizing and publicizing various events and seminars.