Raphaël Morsomme

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Education

Academic interest: statistics, Bayesian inference, MCMC, data augmentation, stochastic processes, conformal prediction, stochastic epidemic models, dynamic models.

2019 – now: Ph.D. Candidate in Statistical Sciences, Duke University.

2014 – 2018: Double bachelor degree of *Liberal Arts and Sciences*:

- Major in Statistics – GPA of 8.7/10 – *Summa cum Laude*
- Honors Program

a) University College Maastricht, The Netherlands

- Best undergraduate program of The Netherlands in 2014-2017

b) University College Freiburg, Germany

c) Exchange at UCLA's Department of Statistics

Major Academic Achievements

Morsomme, R., & Xu, J. (2022). Uniformly Ergodic Data-Augmented MCMC for Fitting the General Stochastic Epidemic Model to Incidence Data. arXiv preprint arXiv:2201.09722.

Morsomme, R., & Smirnov, E. (2020). Valid Prediction Intervals for Course Grades with Conformal Prediction. In 2020 19th IEEE International Conference on Machine Learning and Applications (ICMLA) (pp. 936-941). IEEE.

Morsomme, R., & Smirnov, E. (2019). Conformal Prediction for Students' Grades in a Course Recommender System. In *Conformal and Probabilistic Prediction and Applications* (pp. 196-213).

Morsomme, R., & Alferez, S. V. (2019). Content-based course recommender system for liberal arts education. In *Proceedings of The 12th International Conference on Educational Data Mining (EDM 2019)* (Vol. 748, p. 753).

2018: Bachelor Thesis, Maastricht University, Department of Clinical Genetics
Model embryonic and mitochondrial data in the context of *in-vitro* fertilization.

2017: Bachelor Thesis, Freiburg University, Information System Research Institute
Develop a forecasting model of financial instability based on an anomaly analysis of soft content.

Awards

2021: Young Investigator Award, ASA Section on Statistics in Epidemiology.

Professional Experience

2021-22: Instructor of Record for STA101, Duke University.

2020-21: Research Mentor, Lumiere Research Scholar Program.

2020: Programming Consultant, Children's Environmental Health Initiative, Rice University.

2019: Statistical Consultant, Future Earth, Paris.

2019: Teaching Assistant: Case Studies in Statistics, Duke University.

2018-19: Junior Data Scientist, University College Maastricht.
Task: topic modeling of course content, conformal prediction of course grade and development of a course recommender system for Liberal Arts students.

2017: Research Assistant, the Information System Research Institute, Freiburg.
Task: develop a trading decision support system based on a sentiment analysis of financial news.

2017: Teaching Assistant: Intro to Statistics and Data Analysis, Freiburg University.

Soft skills

- Independent and Critical Thinker
    - Multi-disciplinary education in a Liberal Arts college.
- Problem Solver
    - Undergraduate education based on *problem-based learning* teaching methods.
- Team Worker
    - President of *PINE UCM* (student-run academic initiative)
      Task: promoting pluralism in the teaching of economics at Maastricht University.
    - Successfully designed a course exploring the relationship between the economy and society with five peers. Maastricht University has since offered the course.

Programming Skills

- Proficiency in R, MATLAB, SPSS, LaTeX.
- Working Knowledge of Python, SAS, SQL, Tableau, Weka.

Languages: French (native), English (fluent), Dutch (conversational), German (conversational)

Other experience

2016 – now: Run marathons

2015: Represented Belgium at the final of the *Euromath Cup* – 3rd place.

2014 – 2019: Volunteer at the Red Cross – carrier of blood-related products.

2005: International finalist of the *Championship of Math & Logic Games*.