

FABIEN FORGE MBA, PH.D.

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Last update: November 2022 website: forgef.github.io

EXPERIENCE

The Conference Board of Canada – Data Scientist

Senior Economist

Remote, Canada

May 2022 - Present

- Data Engineering - Creation and maintenance of data pipelines (R language)
- Software Engineering - Creation of internal and web data processing applications (Python)
- Statistics/Economics - reference econometrician, custom research

STATLOG Consulting Inc. – Senior Data Analyst

Economist

Montreal, Canada

Oct 2021 - May 2022

- Legal consulting - I use applied statistics to obtain counterfactual and measure causal impacts. I also use theoretical behavioural modelling.
- Health - Statistical analysis of public health impacts.
- Sector specific demand - forecast of industry specific demand.

Tools:

- Applied statistics for causal inference
- Time series prediction
- Machine learning
- Web and Document Scraping
- Theoretical behavioural economics (industrial organization)

University of Ottawa – Applied Statistics and Machine Learning

Postdoctoral researcher

Ottawa, Canada

Jan 2021 - Dec 2021

- **Research domain:** what are the impact of weather and trees on socioeconomic outcomes in Canada?
- **Deep learning:** I use deep learning and transfer learning to perform remote sensing and map the evolution of urban tree canopy in Canada over the last 15 years
- **Weather satellite data:** I map daily weather data to all Canadian municipalities
- **Causal inference:** I use plausible exogenous variations in tree cover following the random expansion of the emerald ash borer to measure the impact of trees on confidential health and income data
- **Relevant tools used:** Python, R, Tensorflow 2.0, arcGIS, Pandas, Geopandas, xarray, fixest...

McGill University – Quantitative Methods

Lecturer

Montreal, Canada

Sep 2021 - Dec 2021

- Design and teaching of 3rd year course
- Methods of causal inference
(Randomized controlled experiments, difference-in-difference, panel, RDD, IV, matching...)
- Applications in R (tidyverse, ggplot2, plm, fixest...)
- Probability and statistics and sample properties of estimators

University of Ottawa – Data Science and Machine Learning

Lecturer

Ottawa, Canada
Jan 2021 - Dec 2021

- Design and teaching of 4th year course
- Data science techniques, statistical modelling and machine learning
- Linear and non-linear modelling, supervised and unsupervised learning, regression and classification (Least squares, Probit/Logit, Ridge/LASSO, Tree methods, K-means, PCA, Deep Learning)
- Statistical learning and social biases
- Applications in Python (Scikit-Learn, Tensorflow, PyCaret, Statsmodels, Scipy, Pandas, Matplotlib, Seaborn,...)

Royal Military College – Health Economics

Lecturer

Remote, Canada
Jan 2021 - Dec 2021

- Introduction to health economics (course design and online teaching).
- Microeconomic theory of health markets and their agents

McGill University – Applied Environmental Economics

Lecturer

Montreal, Canada
Sep 2021 - Dec 2021

- Design and teaching of 3rd year course
- Introduction to quantitative methods used in environmental economics (RCT, RDD, IV, Panel Data and Lab experiments)
- Research design and interpretation of statistical results

University of Ottawa – Econometrics

Lecturer

Ottawa, Canada
Jan 2020 - Apr 2020

- Design and teaching of 3rd year course in econometrics and statistics
- Methods, conditions and interpretation of causal inference
- Theory and properties of linear estimators
- Applications in Stata

University of Ottawa – Research Coordinator

Head research assistant

Ottawa, Canada
2018 - 2019

- Coordination of 15 research assistants over 2 years
- Teaching of arcGIS
- Weekly advancement meeting and mentoring

Think Tank Different – Researcher in Politics and Economics

Researcher

Paris, France
2014 - 2015

- Research on racial and gender discrimination in France.
- Production of reports for the French government

uMedia – Movie production company

Business Assistant

Brussels, Belgium
2013

- Business administration and strategy

EDUCATION

Ph.D. in Economics – University of Ottawa

Nominated for best doctoral thesis

Ottawa, Canada
Sep 2015 - Dec 2020

- I hold a Ph.D. in economics with a specialization in the two main branches of applied statistics: causal inference and statistical learning for prediction.
- I applied these tools to environmental and health issues (see my research work below)
- In my research, I extensively used data science tools such as Python, R, Google Cloud Computing, Github, Docker... I detail how these tools were used in the academic work and expertise section

Specialization: - Applied statistics for causal inference
- Prediction, data science and machine learning
- Applications to environmental and health economics

University of California Berkeley, Haas Business School

Research visitor

Berkeley, California
Sep 2019 - Jan 2020

- Visiting researcher

MA in Economics – University of Grenoble Alps

Top 1%

Grenoble, France
Sep 2013 - Jul 2014

Specializations: - Economics and Econometrics (statistics)

MBA (Master's in Business Administration) – Kedge Business School

Top 1%

Marseille, France
Sep 2009 - Jul 2013

Specializations: - Economics and Finance

Visiting Student – Brandeis University

Exchange Program, Finance and Economics

Waltham, Massachusetts
Sep 2011 - Dec 2011

University of Grenoble Alps

B.A. in Economics

Grenoble, France
2012

University of Provence

B.A. in English and Spanish

Marseille, France
2009

TECHNICAL STRENGTHS

Languages/Software (advanced*):

Python, R, Stata, ArcGIS

Languages/Software (intermediary):**

SQL, Matlab, Julia, Java, QGIS

Data Science Tools (advanced):

Machine Learning and Deep Learning
Causal inference (including A/B testing)
Web scraping, data mining and unstructured data
Cloud Computing (GCP and AWS)
Github (version control), Web Scraping
Geospatial data

Data Science Tools (intermediary):

Docker, NLP, Network Analysis

*: *advanced* means that I used extensively these tools in my daily work and/or taught them

** : *intermediary* means I would feel comfortable using them fairly quickly in industry