

Benjamin Dubois-Taine

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EDUCATION

Paris-Saclay University

M.Sc. "Mathematics of Artificial Intelligence", 2nd year

Paris, France

Sep. 2020 – Present

University of British Columbia

M.Sc. of Computer Science, 1st year

Vancouver, Canada

Sep. 2019 – Aug. 2020

- Supervisor: Mark Schmidt.
- GPA: 4.1/4.3

McGill University

Honours Bachelor in Computer Science and Mathematics

Montreal, Canada

Sep. 2015 – Dec. 2018

- Supervisor: Tim Hoheisel.
- GPA: 3.94/4.0

EXPERIENCE

Graduate Research Assistant

University of British Columbia

Vancouver, Canada

Apr. 2020 – Aug. 2020

- Proposed a stepsize-free variance reduction algorithm for stochastic optimization, with theoretical convergence guarantees (work to be published).
- Improved the algorithm using different heuristics, shown to be consistent over several datasets throughout numerous experiments.
- Supervisor: Sharan Vaswani.

Graduate Teaching Assistant

University of British Columbia

Vancouver, Canada

Sep. 2019 – Apr. 2020

- For a graduate introductory level course in machine learning.
- Topics included: regression, classification, clustering, kernels, dimensionality reduction, convolutions, etc.
- Held weekly tutorials for students, observed office hours to answer questions, graded exams and assignments.

Data Science Intern

R&D Team, Giro Inc.

Montreal, Canada

Jan. 2019 – Jul. 2019

- Extracted public transport networks data from different sources in order to better optimize drivers and bus schedules (C++).
- Cleaned up, formatted and visualized data using common libraries (Pandas).
- Implemented, tested and compared classical machine learning and deep learning algorithms on classification tasks.
- Formatted and presented results in a comprehensible way so that non-technical management teams could make decisions based on them.

Undergraduate Research Assistant

McGill University

Montreal, Canada

May 2018 – Aug. 2018

- Pursued research in optimization as a recipient of the Science Undergraduate Research Award, under the supervision of Prof. Tim Hoheisel.
- Proposed and implemented a Newton-type method for the Fermat-Weber location problem with "weighted" Euclidean norm, proving local quadratic convergence under suitable assumptions.
- Implemented several classical first and second order optimization algorithms to study their convergence on the same problem with different norms.

TECHNICAL SKILLS

Programming Languages: Python, Julia, Matlab, Java, C++, R, \LaTeX .

Developer Tools: Git, Visual Studio, PyCharm, Spyder, Jupyter, Eclipse.

Libraries: NumPy, Matplotlib, Pandas, Scikit-learn, Pytorch, Keras.

Languages: French (mother tongue), English (fluent), Spanish (basic).