Christopher Criscitiello

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Residence: Switzerland (B Permit)
Citizenship: USA

Education

EPFL (École Polytechnique Fédérale de Lausanne) — January 2021 – Present
PhD candidate in Applied Mathematics, advisor: Nicolas Boumal — *Lausanne, VD, Switzerland*

Princeton University — Class of 2019
Bachelor's in Mathematics, Magna Cum Laude — *Princeton, NJ, USA*

Research

Research interests: Optimization, machine learning, numerical analysis, geometry

Selected Publications

Curvature and complexity: Better lower bounds for geodesically convex optimization – Criscitiello, Boumal
Conference on Learning Theory (COLT), 2023

Negative curvature obstructs acceleration for strongly geodesically convex optimization, even with exact first-order oracles – Criscitiello, Boumal
Conference on Learning Theory (COLT), 2022

An accelerated first-order method for non-convex optimization on manifolds – Criscitiello, Boumal
Foundations of Computational Mathematics (FoCM), June 2022

Efficiently escaping saddle points on manifolds – Criscitiello, Boumal
Advances in Neural Information Processing Systems (NeurIPS), 2019

Work Experience

Data Analyst — February 2020 – December 2020
Black Snow Capital and Rose Technologies (rose.ai) — *New York City, NY, USA*
- Consultant for Better Mortgage: improving and automating their online mortgage pipeline; using data to identify and nurture talent within the organization as well as for recruiting.

Data Science Intern — November 2019 – January 2020
Black Snow Capital and Rose Technologies (rose.ai) — *New York City, NY, USA*
- Sentiment analysis on financial news articles. Building algorithms for DAG visualization.

Awards

Best Paper for Young Researchers Prize, Int'l Conference on Continuous Optimization (ICCOPT'22)
Shapiro Prize for Academic Excellence, Princeton University
Manfred Pyka Memorial Prize in Physics, Princeton University
Dean's award for excellence in teaching, EPFL

Skills

Programming Languages: Python, Java, C/C++, SQL, MATLAB, Mathematica, Visual Basic
Experience cleaning large data sets, web scraping, table extraction, training machine learning models.

Reviewing, Teaching, Volunteer

Conference/Journal reviewing for: Journal of Machine Learning Research (JMLR), NeurIPS, IMA Journal of Numerical Analysis, Machine Learning (Springer).
EPFL teaching assistant for: Optimization on manifolds, Analysis III, Analysis IV, linear algebra.
Princeton MathReach: Teaching math to underprivileged high school students.
Math tutor for Varisty Tutors: Summer 2017.