

EDUCATION

Master of Applied Mathematics

ETH Zurich

2022 — Present

- Topics in Applied Maths : Statistical Modelling, Fundamentals of Mathematical Statistics, Financial Engineering, Mathematical Finance, Life insurance Mathematics, Risk Modelling and Management, Quantitative Risk Management, AI in the Sciences and Engineering and Reinsurance Analytics.

Bachelor of Mathematics

EPFL

2018 — 2022

- Topics in Fundamental Maths : Real and Complex Analysis, Linear Algebra, Topology, Rings and Fields, Functional Analysis, Group Theory, Causality and Inference, Non-Linear Optimization and Discrete Maths.
- Topics in Applied Maths : Probability and Statistic theory, Martingales and Brownian motions, Time series, Stochastic processes and Graph theory.

PROFESSIONAL EXPERIENCES

Actuarial Intern / Reinsurance

Sompo International

July 2023 — January 2024

Zürich, Switzerland

- Analysis and pricing in the Casualty LoB for reinsurance contracts.
- Implementation of mathematical tools for better performance and accuracy in the pricing.

Machine Learning Intern / Intelligent Document Processing

Infosys Limited — Edgeverve

July 2022 — August 2022

Bangalore, India

- Extraction and summarization of relevant information from data.
- NLP, computer vision and speech recognition.

Teaching Assistant / Chair of Stochastic Processes

EPFL

November 2021 — July 2022

Lausanne, Switzerland

PROJECTS AND RESEARCHES

Extrapolation-Aware Nonparametric Inference: Integrating ML techniques in Real-World Data Analysis

2024

Master thesis, Statistics

- Exploration of an extrapolation method applied to Quantile Random Forest and Quantile Neural Network and their conformal prediction extension. Application to various real-world datasets.

VaR and CVaR analysis for risk management

2023

- Forecasting of risk measures using historical, parametric and Monte Carlo simulation estimations and application to the CAC40 index.

Predictive modeling for insurance claim: Dealing with the challenge of accurate prediction

2023

- Comparison of methods to predict client claims for imbalanced dataset (Linear Models / Ensemble learning / Deep Learning).

Chebyshev method for the implied volatility in options pricing

2021

Bachelor project, Numerical Analysis

- Implementation of a bivariate interpolation method, using Chebyshev polynomials to approximate the implied volatility in the BS framework.

SKILLS

Tools and Languages:

Python (Advanced)
RStudio (Advanced)
Matlab (Intermediary)
C++, C# (Beginner)
L^AT_EX (Advanced)
Excel (Advanced)

Communication:

French (native)
English (fluent)
Spanish (notions)

Hobbies:

Judo (black belt) and Sport in general
Watch addict