Enea Monzio Compagnoni

PhD Student, B.Sc., M.Sc., M.Sc.

Zurich | Webpage | eneamc | enea.monziocompagnoni@unibas.ch | +41 779764632

Availability for Internship

I will be available from the **1st of April 2024**.

Academic Experience

UNIVERSITÄT BASEL | PhD Student and Lecturer in Computer Science and Maths

10/22 – 10/25 | Basel, Switzerland

Activities:

- → Research in Stochastic Optimization for Deep Learning.
- → Teaching Assistant for the Deep Learning Foundations and Optimization classes.

Research Interest:

- → Stochastic Optimization • Implicit Bias • Deep Learning Theory.

Industry Experience, 3+ Years

YAHOO! RESEARCH | Scalable ML Team - Intern

07/23 – 09/23 | Munich, Germany

- → Theorized and Implemented a Risk-Aware Framework for Optimal Control of Advertisement Budgeting.
- → Increased Performance of the Spending Control by 4% (A/B Testing Included).

UBS AG | AI Quantitative Analyst - Full Time

07/19 – 09/22 | Zurich, Switzerland

- → Translated best practice of Credit Officers and Advisors into a concrete model for Lombard Lending to Ultra-High-Net-Worth Clients.
- → Increased accuracy of Liquidity forecasting by 3%: Coupled extensive model selection, statistical hypothesis testing, and business requirements.
- → Improved Anti-Money Laundering methodology: Developed classification and clustering models (e.g. AdaBoost, t-SNE). Found previously unknown patterns.

Education

MASTER IN QUANTITATIVE FINANCE ETH Zurich | GPA 5.76/6: Summa Cum Laude

Achieved as working student at UBS AG

09/18 - 04/22 | Zurich, Switzerland

Ranked 4th best Master in Quant Finance (2021) | Link

MASTER IN MATHEMATICS University of Milan | 110/110: Summa Cum Laude

10/15 - 05/18 | Milan, Italy

BACHELOR IN MATHEMATICS University of Milan | 110/110: Summa Cum Laude

09/12 - 10/15 | Milan, Italy

Publications

AN SDE FOR MODELING SAM: THEORY AND INSIGHTS | LINK | ICML 2023

E. Monzio Compagnoni*, L. Biggio, A. Orvieto, F. Proske, H. Kersting, A. Lucchi

ON THE EFFECTIVENESS OF RANDOMIZED SIGNATURES AS RESERVOIR FOR LEARNING ROUGH DYNAMICS | LINK | IEEE IJCNN 2023

E. Monzio Compagnoni*, A. Scampicchio, L. Biggio, A. Orvieto, T. Hofmann, J. Teichmann

RISK SHARING WITH DEEP NEURAL NETWORKS | LINK | J. QUANT FINANCE

E. Monzio Compagnoni*, M. Burzoni*, A. Doldi*

Skills

PROGRAMMING

- Python (Advanced)
- SAS (Basic)
- SQL (Basic)
- R (Basic)
- MATLAB (Basic)

MACHINE LEARNING

- JAX • TensorFlow
- PyTorch • Time Series
- (Stochastic) Optimization
- Reservoir Computing
- SDE Modeling
- Sharpness-Aware Minimization
- Minimax Problems

MATHEMATICS

- Stochastic Calculus • PDEs
- Rough Path Theory
- Advanced Probability
- Real & Functional Analysis
- Mathematical Finance
- Quantum Mechanics

STATISTICS

- Data Cleaning • Imputation
- Inference • Estimation
- Hypothesis Testing
- Multivariate Analysis

Certificates

DEEP LEARNING SPECIALIZATION

Coursera | Link

Interests

- Cooking • Fitness • Gym
- Strategy Board Games
- Gardening • Collectibles

Languages

- Italian (Mother Tongue)
- English (IELTS Academic: C1)
- German (A1.2)
- Lombard (Mother Tongue)