Enea Monzio Compagnoni

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

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AVAILABILITY FOR INTERNSHIP

I will be available from the 1st of June 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.
- \rightarrow 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 OUANTITATIVE 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

SELECTED 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)