

Marcello Massimo Negri

PROFILE

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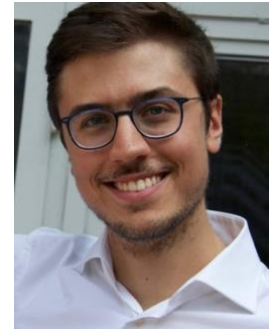
Personal website: <https://mnegri.netlify.app/>

GitHub: <https://github.com/marcello-negri>

Nationality: Italian

Date of birth: 04/01/1998

Languages: Italian, English (IELTS 8/9), German (B1)



WORKING EXPERIENCE

- **ETH Zurich** Rämistrasse 101, 8092 Zürich, CH
 - **Research assistant:** Chair of *Data Analytics Lab* supervised by Prof. T. Hofmann 03/2021-06/2021
I worked on a **deep learning project** in the framework of **gravitational wave physics**: I developed an emulator of complex cosmological simulations and an inverse-regression model to constraint the source of gravitational waves.
 - **Research assistant:** Chair of *Systems Design* supervised by Prof. F. Schweitzer 06/2020-03/2021
My work included data analysis tasks for three different research projects where I mainly performed **data collection**, **processing** and **cleaning** tasks, dealing with large datasets in a Python and Unix environment.

EDUCATION

- **Universität Basel** Peterspl. 1, 4001 Basel, CH
Dr. in Machine Learning 02/2022-ongoing
 - The scope of my doctoral is very broad and I currently focusing on generative models such as VAEs and normalizing flows, physics inspired neural networks and molecule generation.
- **ETH Zurich** Rämistrasse 101, 8092 Zürich, CH
M.Sc. in Physics - GPA 5.71/6 09/2019-12/2021
 - **Master's Thesis:** Chair of *Biomedical Informatics* Prof. G. Rätsch - **published**
meta-learning • VAEs • priors • few-shot learning • probabilistic machine learning
 - **Semester research project:** *Complex Networks* Prof. F. Schweitzer - **publication in progress**
time series • complex networks • similarity • time-window detection
 - **Semester research project:** *Trapped Ion Quantum Information* Dr. F. Reiter
quantum computers simulation • symmetries • exponential computational speed-up
- **Università Statale degli Studi di Milano** via Celoria 16, Milano, IT
B.Sc. in Physics - 110/110 cum laude 09/2016-07/2019
 - **Bachelor's thesis:** "Machine learning for di-tau invariant mass reconstruction in ATLAS"
neural network • boosted regression trees • AUC • Higgs physics

PUBLICATIONS

M. Negri, V. Fortuin, J. Stühmer, "Meta-learning richer priors for VAEs", AABI 2022 [pdf](#) and [poster](#)

M. Negri, G. Andres, G. Vaccario, G. Casiraghi, "Optimal time window detection for time-stamped interactions", **in progress**

COMPUTER SKILLS

Machine learning libraries: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, SciPy
Programming languages: **Advanced:** Python, C++, Shell Scripting, LaTeX - **Basic:** R, Mathematica
Operating systems: Linux, Mac OS, Microsoft Windows