Francesco Lässig

Data Scientist

> Professional Summary

I am a Data Scientist with extensive experience in machine learning, deep learning, and software engineering. Among my most noteworthy achievements are the development of one of the most popular time series forecasting libraries in Python, the development of an end-to-end anomaly detection solution for a Swiss energy company, and the development of a chatbot prototype for one of the major US tech companies. I am interested in closing the gap between the state-of-the art in ML technologies and what's actually being used in industry.

> Key competences

Machine Learning and Deep Learning – Extensive experience in conceptualizing ML solutions, designing deep learning architectures (PyTorch), developing end-to-end processing pipelines, and implementing production ready solutions on various platforms.

Software Engineering – Proficient in various programming languages (Python, Java, C++), version control frameworks, experienced in applying software engineering design principles, SCRUM workflow and coordination in large-scale development projects.

Communication of technical topics to specialized and general audiences – Substantial experience in presenting at public facing events such as webinars and conferences, as well as communication with clients from a wide range of industries of various levels of technical expertise.

> Work experience

2020 - 2022, 2024 — **Unit8** (Switzerland)
Data Scientist
- **Developed a major part of *Darts***, an open source library for time series forecasting, including statistical and deep learning-based forecasting tools. Presented *Darts* at the *EuroPython* 2021 conference and the *PyData Global* 2021 conference. During the time I worked on *Darts*, its GitHub page went from 0 to over 3.3k stars.
- **Devised and implemented a RAG chatbot** prototype for one of the 5 major US tech companies (FAANG).
- **Built a ML-based predictive maintenance tool** for a Swiss hydro power plant, all the way from exploratory data analysis and model development to backtesting and deployment.
- **Developed a demand forecasting solution** for a Swiss manufacturer of laboratory and industry equipment which improved their existing forecasts by 10% - 50% (depending on the metric).
- **Co-hosted multiple technical public webinars** revolving around topics in data science and machine learning.

2023 — **University of Amsterdam** (Netherlands)
Researcher in Computational Neuroscience
- **Worked on the ARC-INTREPID project**: an international research effort comparing three of the most prominent neuroscientific theories of consciousness.

2019 — **Araneum Technologies** (Switzerland)
Machine Learning Engineer
- **Devised and built machine learning solutions** for small and medium-sized Swiss banks such as product recommendation systems based on credit card transaction data.

> Education

2020 - 2022 — **ETH Zürich / UZH, Switzerland**
MSc in Neural Systems and Computation
First author of an original research article based on my master thesis (which received the maximum grade), which was **published** in the *Biological Cybernetics* journal.

2018 **University of Pennsylvania, USA**
BSc, Computer Science (exchange program)
Received honorable mention for Facebook-sponsored award in a project-based coding competition as part of the NETS 212 course (among top 4 of 54 teams).

2016 - 2020 **ETH Zürich, Switzerland**
BSc, Computer Science
Completed degree with a GPA of 5.36 (out of 6), **received a scholarship** for a selective exchange program to the University of Pennsylvania, **worked as a student assistant** teaching calculus.

> Peer-Reviewed Publications

2022 Lässig, Francesco et al. "*Bio-Inspired, Task-Free Continual Learning through Activity Regularization*" *Biological Cybernetics* (2022).

2022 *Herzen, Julien, Francesco Lässig et al. "Darts: User-friendly modern machine learning for time series." Journal of Machine Learning Research 23, no. 124 (2022): 1-6.*

> Language skills

German First language
English Level C2 (received grade A in the Cambridge Proficiency Exam)
Italian Level B2 / C1