Luca Benfenati
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March 28, 1998
Aspiring Data Scientist and Machine Learning Engineer

Formation

- MSc. Data Science and Engineering @ Politecnico di Torino — Sep 2020 - July 2023
  - Computer science degree focused on Machine Learning and Deep Learning
  - CGPA: 28.6 / 30
  - Final grade: 110 / 110
- Master's Thesis @ ETH Zurich — Nov 2022 - May 2023
  - Machine learning for seizure detection on EEG data
  - Invited visiting student for a 6 months stay at the Integrated Systems Laboratory
  - Scholarship winner, funded by Politecnico di Torino
  - Topics: large language models, transformers and auto-encoders
- BSc. Electronic Engineering @ University of Bologna — Sep 2017 - July 2020
  - Merit Scholarship winner
  - Thesis: 'Clustering techniques for multicast precoding in multi-beam satellite systems'
  - CGPA: 28.3 / 30
  - Final grade: 110 / 110 with honours

Experience

- Data Science Intern @ KPMG Lighthouse — May 2022 - Sep 2022
  - Machine Learning for predictive maintenance and emerging issues detection
  - Improved already deployed algorithms, integrating data from 9 different sources
  - Worked with a team of 10 people, in collaboration with a top-tier automotive manufacturer
  - Skills: Python, PySpark, C++, Data Visualization with Qlik
- Junior Teaching Assistant @ Politecnico di Torino — Sep 2021 - Mar 2022
  - Assistant of "Data Management and Visualization" course
  - Held laboratory activities together with other teaching assistants
  - Prepared lecture materials (slides and summaries) for the Main Professor
  - Actively managed the student forum
  - Skills: Python, SQL, Tableau

Main Projects (others at my github)

- Unsupervised and Self-supervised Machine Learning for Epilepsy detection on EEG data — 2023
  - Replicated Unsupervised approaches based Autoencoders and CNN with Anomaly Detection
  - Adapted NLP-inspired Large language models to the EEG scenario
  - Topics: large language models (LLM), transformers and auto-encoders
- Real-time Domain Adaptation in Semantic Segmentation — 2022
  - Unsupervised Domain adaptation for adversarial learning of CNN
  - Autonomous-driving scenario with two different datasets
  - Topics: Pytorch, adversarial training
- Edge-Cloud Collaborative Inference for IoT — 2022
  - Inference of "mini" speech commands on edge (Raspberry Pi)
  - Edge-cloud collaborative inference to improve overall accuracy
  - Topics: Tensorflow, Restful API, HTTP, MQTT

Skills

Programming : Python (Advanced), C++ (Intermediate)
Platforms and Technologies : Pytorch, Tensorflow, Tableau, Git, Hadoop, SQL, MongoDB
Languages : English (fluent), Italian (native)