Tommaso Alfonsi

Nationality: Italian   **Date of Birth:** 29/12/1993
Residence: Via Vittorio Veneto 12, Varese 21100 (VA)

Postdoctoral research fellow in genomic data science and bioinformatics at Politecnico di Milano.
Passionate about sailing, computer science, engineering, motorsport, and biology.
I seek the opportunity to bring innovation inside dynamic and emerging companies through my software and analytical skills.

EDUCATION

Politecnico di Milano 2020-2024
PhD in Information Technology – cum laude

Politecnico di Milano 2017- 2020
Master's degree in computer science and engineering – 102/110

WORK EXPERIENCE

Politecnico di Milano – Postdoctoral Research Fellow 2024 – present
Activities

- Solved problems of data clustering, dimensionality reduction, binary and multinomial classification, and feature selection
- Applied statistics: McNemar test of significance, Pearson correlation test
- Dockerization of web apps
- Creation of web apps for showcasing interactive data analysis pipelines

Featured collaborations:
- **Prof. Ilaria Capua**, Senior Fellow of Global Health, Johns Hopkins University, Baltimore

Politecnico di Milano – PhD in Information Technology 2020 – 2024
Activities

- Development of a data-driven method for detection of anomalies
- Applied statistics: hypothesis testing, estimation of model's parameters, model comparison and selection
- Big data management and efficient querying through relation (PostgreSQL) and no-SQL systems (mongoDB)
- Cloud computing (AWS EC2) and distributed data management
- Development of ETL pipelines, backend APIs for data integration and exploration
- Parallel computing algorithms with Scala and Python
- Teacher of Python and C programming at Politecnico di Milano

University of Oxford – Artificial Intelligence and Machine Learning Course 08/2022
Activities

- Development of linear ML models for regression and classification problems with MLE and gradient descent methods
- Development of non-linear ML models (NNs, CNNs, RNNs) for image recognition
- Implementation of common techniques for regularization and hyperparameters estimation
- Use of PyTorch, TensorFlow, Scikit-learn Python libraries

AWARDS

16 Oct 2024 **–** Dimitri N. Chorafas award for the extraordinary scientific achievements in computers and communications technology

More details on my website

CONTACTS:

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WEBSITE: https://tomalf2.github.io

LINKEDIN: linkedin.com/in/tommaso-alfo

CODING LANGUAGES:

Python (4+ years and course teacher)
Scala
Java
PHP, JavaScript
C (course teacher)
C++
P5js

QUERY LANGUAGES:
SQL (2+ years)
Mongo QL
XQuery/XPath

OTHER LANGUAGES:
HTML/CSS
Git
Bash

SPOKEN LANGUAGES:

English (work proficiency)
Italian (mother tongue)

SOFT SKILLS:

Attention to detail
Teamwork
Effective communication
Active listening
Critical thinking

DRIVING LICENSE:

Category B