



Niccolò Ajroldi

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🔗 Niccolo-Ajroldi

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PROFILE

Mathematical Engineer with a strong interest and expertise in Machine Learning. Solid applied math background and statistics education. Excellent coding skills.

SKILLS

- Advanced knowledge of: **C++, R, Python, LaTeX.**
- Intermediate knowledge of: **Matlab, Git, MPI, Keras.**
- Experience with ML and DL
- Experience with optimization and operational research.
- Ability to communicate results through scientific reports and web-apps like RShiny.

LANGUAGES

- **Italian:** native speaker
- **English:** business proficient
- **German:** beginner

INTERESTS

- **Volunteering:** I distributed food parcels in Milan during Covid-19 pandemic, and I participated in several solidarity projects.
- **Rock climbing & cycling:** I do sport regularly, and I am always looking for new adventures.

WORK EXPERIENCE

Machine Learning Researcher

U-Care Medical
Turin
2021-ongoing

I am responsible for developing ML and DL algorithms in order to predict Acute Kidney Injury in ICU patients. I build ML models, perform statistical analysis and manage large clinical datasets. Furthermore, I work daily with Python ML and DL libraries.

Teaching Assistant

Politecnico di Milano
Milan
2020-2021

Teaching assistant of the course "Algorithms and Parallel Computing" helping students during laboratories on C++, OOP, parallel programming, MPI, algorithmic complexity and data structures. Lectures were held in English.

EDUCATION

Mathematical Engineering & Statistical Learning

Milan
2019-2021

Master of Science at Politecnico di Milano

Grade: **110/110** (GPA of 28.36/30)

Thesis: Conformal Prediction for Functional Time Series Forecasting

Courses: Machine Learning, Stochastic Processes, Linear Algebra, Bayesian Statistics, Data Mining, Game Theory, Applied Statistics.

Mathematical Engineering

Milan
2015-2019

Bachelor of Science at Politecnico di Milano

Thesis: Deep Learning Optimization Algorithms near Saddle Points.

RESEARCH PROJECTS

• Bayesian Nonparametric Clustering of Functional Data

Implementation of a Dirichlet Process mixture model to cluster comatose patients starting from central nervous system response to electrical stimuli.

• Predicting & preventing collateral effects of radiotherapy

Identification of risk factors related to prostate radiotherapy, using tools such as SVM, functional k-means, FPCA and inferential statistics methodologies.

• Cloud Resource Allocation in DL Applications

Integration of a C++ software with local search techniques in order to improve the scheduling phase of Deep Learning applications.

• Nonparametric Statistical Analysis of 2020 US Elections

Analysis of 2020 US Presidential Elections, using tools from Nonparametric Statistics, such as permutation tests, Conformal Prediction, GAM.