### Lorenzo Bagnol

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# Summary

I am an Al reasearcher at «Università di Pisa» in deep learning and NLP.

I also have a Master's Degree in Pure Mathematics. I also have passed some exams of the Physics department about general relativity and field theory.

### Education

Master's Degree in Mathematics, Università di Roma «La Sapienza», 2019 – 2021

Thesis: finite dimensional representations of the maximal compact subalgebra of symmetrizable Kac-Moody algebras

Vote: 110/110 cum laude

o Bachelor's Degree in Mathematics, Università di Roma «La Sapienza», 2016 – 2019

Thesis: differential, symplectic geometry about Atiyah-Guillemin-Sternberg theorem

vote: 110/110 cum laude

#### Certifications

Introduction to Machine Learning, Coursera and Duke University (2021)

Machine Learning, Stanford University (2021)

Supervised learning (parametric/non-parametric algorithms, support vector machines, kernels, NNs), unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning), evaluations of a model's performance using bias/variance theory. Implementation in MatLab.

Specialization: Machine Learning, Coursera and Stanford University (2022)

ML models in Python using NumPy, scikit, TensorFlow and Keras on Jupyter. Linear regression, logistic regression, NNs (for multi-class classification), decision trees method, unsupervised learning, recommender systems and deep reinforcement learning model.

Certifications in this specialization:

- Supervised Machine Learning Regression and Classification
- Advanced Learning Algorithms
- Unsupervised Learning, Recommenders, Reinforcement Learning
- o Specialization: Natural Language Processing, Coursera and Stanford University (2022)

Certifications in this specialization:

- Natural Language Processing with Classification and Vector Spaces
- Natural Language Processing with Probabilistic Models
- Natural Language Processing with Sequence Models
- Natural Language Processing with Attention Models

## Work experience

o NTT Data (2022)

SOFTWARE DEVELOPER ENGINEER: Microsoft technologies (Azure, ASP.NET), MVC, DateBase (SQL Server), C#, Reactjs

Al Researcher at «Università di Pisa» and Intern at Al Technologies s.r.l. (Present)

I'm studying and building NLP models using pytorch 2.0 and tensorflow 1.x, 2.x /Keras (with Sequential API, subclass API, functional API) frameworks with tensorboard.

Languages 1

Italian: native language

English: B2 level (written and spoken)

French: basic level

Software

Programming languages: Python 3.10, C, C++, C#, TypeScript, MatLab

Database: SQL Server

Operating Systems: Microsoft, Linux

Libraries: Numpy, Pandas, TensorFlow, Scikit-Learn, Matplotlib, Keras, PyTorch,

Tensorboard

Version control platform: GitHub