



Francesco Stranieri

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ABOUT ME

“An expert is a man who has made all the mistakes which can be made, in a narrow field.” — Niels Bohr

EDUCATION AND TRAINING

National PhD Student in Artificial Intelligence (Industry 4.0)

Polytechnic University of Turin [Nov 2021 – Current]

Address: Turin (Italy)

<https://www.phd-ai.it/en/>

Level in EQF: EQF level 8

Italian PhD program in Artificial Intelligence.

PhD Scholarship 'Subsymbolic Artificial Intelligence for Industry 4.0' funded by University of Milano-Bicocca and Italian Ministry of University and Research (MUR).

Master Degree in Computer Science (LM-18)

University of Milano-Bicocca [Aug 2019 – Oct 2021]

Address: Milan (Italy)

<https://en.unimib.it>

Final grade : 110/110 cum laude – Level in EQF: EQF level 7

Type of credits: CFU – Number of credits: 120

Thesis: A Deep Reinforcement Learning Approach to Supply Chain Inventory Management Optimization

<https://bestr.it/award/show/GstlhP26QaSgfe9wGqEAzw>

Bachelor Degree in Computer Science (L-31)

University of Milano-Bicocca [Aug 2016 – Jul 2019]

Address: Milan (Italy)

<https://en.unimib.it>

Final grade : 110/110 cum laude – Level in EQF: EQF level 6

Type of credits: CFU – Number of credits: 180

Thesis: Reinforcement Learning: Empirical Study on Trade-off between Exploration and Exploitation for Atari videogames

<https://bestr.it/award/show/973bf088a2f880793dad7263666564c9ffc38464>

High School Qualification in Computer Science

I.T.I. P. Henseberger [Jul 2016]

Address: Monza (Italy)

<https://www.henseberger.edu.it/>

24 CFU Formative Path for Teaching

Scuola di Alta Formazione San Giuseppe Moscati [Oct 2022]

Address: San Lorenzo del Vallo (Italy)

<http://scuoladiformazioneangiuseppe.org>

Final grade : 30/30

Type of credits: CFU – Number of credits: 24

WORK EXPERIENCE

University Tutor

University of Milano-Bicocca [Sep 2021 – Current]

- <https://www.disco.unimib.it/en>

City: Milan

Country: Italy

- Business or sector: Education

Academic Year 2021/2022 and 2022/2023.

Course 'Operations Research and Resource Planning' (MAT/09), 40 hours.

Professor

ITS Angelo Rizzoli [Sep 2020 – Jul 2022]

- <https://www.itsrizzoli.it/>

City: Milan

Country: Italy

- Business or sector: Education

Academic Year 2020/2021 and 2021/2022.

Course 'ITS Machine Learning Specialist', Training Unit 'Programming Language for Machine Learning' (R programming language).

University Tutor

University of Milano-Bicocca [Sep 2019 – Sep 2020]

- <https://www.disco.unimib.it/en>

City: Milan

Country: Italy

- Business or sector: Education

Academic Year 2019/2020.

Course 'Design and Analysis of Algorithms' (INF/01), 60 hours.

Course 'Probability and Statistics for Computer Science' (MAT/06), 30 hours.

Course 'Operating Systems and Networks' (INF/01), 60 hours.

Extracurricular Internship

AnciLab [Jan 2021 – May 2021]

- <https://www.hubout.it/en/sinergie-2/>

City: Cinisello Balsamo

Country: Italy

- Business or sector: Education

The Entrecomp Lab Senior (258 hours) are aimed at young people aged between 21 and 30, that are interested in developing their own business idea, or willing to increase their skills in this area. The 40 participants will be divided into unedited multidisciplinary teams and supported through specific mandatory trainings, complemented by meetings with local businesses and innovative startups. The laboratory will work as an incubator for entrepreneurial ideas, focusing in particular on teamwork and experimentation with relational/social dynamics in the work context. Participants will also receive training on acquiring new tools for work and communication.

NETWORKS AND MEMBERSHIPS

Founder and President

[RipetHub APS, Feb 2020 – Current]

RipetHub is a non-profit association whose aim is to contrast the phenomenon of early school leaving, promoting the study as a tool for emancipation and prevention of discomfort through an innovative and accessible platform.

<https://www.hubout.it/en/ripethub-2/>

Area IT Member

[Mu Nu Chapter of IEEE-Eta Kappa Nu (IEEE-HKN), Mar 2022 – Current]

IEEE-Eta Kappa Nu (IEEE-HKN) is the Honor Society of IEEE, created to identify and encourage excellence in the profession and education in IEEE fields of interest.

<https://hknpolito.org>

Laboratory Member

[Models and Algorithms for Data and Text Mining (MAD-LAB), Aug 2019 – Current]

Artificial Intelligence, Machine Learning, and Data and Text Mining are the keywords that best describe the research activities of the MAD laboratory. The main research topics are Bayesian networks, causal networks, and topic models. The main application domains are biology, medicine, finance, and recommendation systems.

<https://www.mad.disco.unimib.it/>

Member

[Italian Association for Artificial Intelligence (AIxIA), Oct 2020 – Current]

The Italian Association for Artificial Intelligence (AIxIA) is a non-profit scientific society founded in 1988 and devoted to advancing the knowledge and understanding of Artificial Intelligence in Italy.

<https://aixia.it/en/>

Member

[Italian Association of PhD Candidates and PhDs (ADI), Nov 2021 – Current]

ADI is an association that represents and protects PhD students, research fellows, and young researchers while committing to the enhancement of the title of PhD in the public and private sector.

<https://dottorato.it>

PUBLICATIONS

Hard and Soft EM in Bayesian Network Learning from Incomplete Data

[2020]

<https://doi.org/10.3390/a13120329>

Algorithms 2020, 13(12), 329.

CONFERENCES AND SEMINARS

Attendee - EWRL 2022

[Polytechnic University of Milan, Sep 2022]

The 15th European Workshop on Reinforcement Learning (EWRL).

Paper accepted and selected as a poster presentation.

<https://ewrl.wordpress.com/ewrl15-2022/>

https://www.frenkowski.it/Poster_Stranieri_EWRL_2022.pdf

Invited Speaker

[Polytechnic University of Turin, Jun 2022]

Seminar entitled 'An Introduction to Reinforcement Learning and an Application to the Inventory Management Problem' for the students of the Master's course 'Operational Research: Theory and Applications'.

<https://www.polito.it>

Attendee - Spotlight Seminars on AI (Spring 22)

[Virtually, Apr 2022]

The seminar series aims to illustrate, explore and discuss current scientific challenges, trends, and possibilities in all branches of the AI research field. The seminars will be held by leading Italian researchers as well as by top international scientists, and they are also included in the Italian PhD program in Artificial Intelligence.

<https://aixia.it/en/spotlight-seminars-on-ai-spring-2022/>

Attendee - AIXIA 2021

[University of Milano-Bicocca, Dec 2021]

The 20th International Conference of the Italian Association for Artificial Intelligence (AIXIA).

<https://aixia2021.disco.unimib.it>

Hackathon Participant - PGBH 2021

[University of Milano-Bicocca, Dec 2021]

Pangenomics Bio Hacking 2021 Conference (PGBH).

<https://pgbh2021.pangenome.eu/>

Attendee - AIXIA 2020

[Virtually, Nov 2020]

The 19th International Conference of the Italian Association for Artificial Intelligence (AIXIA).

<https://aixia2020.di.unito.it>

Local Organizing Committee - MDAI 2019

[University of Milano-Bicocca, Sep 2019]

The 16th International Conference on Modeling Decisions for Artificial Intelligence (MDAI).

<https://www.mdai.cat/mdai2019/>

Organizer and Speaker - The 24 Hours of Future

[LibertHub, Nov 2019]

A cycle of four events (1. AI and Ethics, 2. Reinforcement Learning, 3. Smart Cities, 4. Importance of Data) concerning Artificial Intelligence and the role of Ethics.

<https://www.frenkowski.it/le24oredelfuturo.pdf>

CERTIFICATIONS

Bbetween Languages - English B2

[Apr 2021]

University of Milano-Bicocca

<https://bestr.it/award/show/vbS2x9BAQmO1aTVk7yGPWg>

Academic Skills - English B2

[Dec 2020]

University of Milano-Bicocca

<https://bestr.it/award/show/vN-0BXbYQ8eM2w7Gs0VpbA>

Bibliographical Research

[Nov 2020]

University of Milano-Bicocca

<https://bestr.it/award/show/FQ9oNgOsSe2TVene1VU6fg>

iBicocca Silver

[Jun 2020]

University of Milano-Bicocca

<https://bestr.it/award/show/-2Ep3-EwTlGAFhDwLjypw>

Probabilistic Graphical Models - Specialization

[Feb 2020]

Stanford University

<https://www.coursera.org/account/accomplishments/specialization/J3GC26PULG6G>

Introduction to Data Mining - Pathway

[Oct 2019]

University of Milano-Bicocca

<https://bestr.it/award/show/bfff43c5c4c817941e01df09bdad4ceb473089d0>

Database, Analytics & Management

[Oct 2019]

Amazon Web Services (AWS)

Samsung Innovation Camp

[Dec 2018]

Samsung

<https://bestr.it/award/show/7838df45dad9e6d1946cc44b8af7ece86deb4430>

Elements of AI

[Aug 2018]

University of Helsinki

<https://certificates.mooc.fi/validate/d0dbqlq2n5k>

Fundamentals of Digital Marketing

[Jul 2018]

Google

<https://goo.gl/BjZHQX>

Introduction to the Internet of Everything

[May 2016]

Cisco

Cisco CCNA (Routing and Switching)

[May 2016]

Cisco

Cisco IT Essentials

[May 2015]

Cisco

ECDL Standard

[May 2015]

Italian Association for Informatics and Automatic Computing (AICA)

<https://goo.gl/Jm5Doq>

ECDL Base

[Apr 2015]

Italian Association for Informatics and Automatic Computing (AICA)

<https://goo.gl/h7xeUV>

ECDL IT Security

[Nov 2014]

Italian Association for Informatics and Automatic Computing (AICA)

<https://goo.gl/vgbLTI>

HONOURS AND AWARDS

Poster Presentation Award

Mediterranean Machine Learning (M2L) Summer School [Sep 2022]

A \$150 award for having presented a poster entitled 'A Deep Reinforcement Learning Approach to Supply Chain Inventory Management' at the 2nd edition of the Mediterranean Machine Learning (M2L) Summer School.

https://www.frenkowski.it/Poster_Stranieri_M2L_2022.pdf

University Scholarship

University of Milano-Bicocca [Nov 2020]

University Scholarship

University of Milano-Bicocca [Nov 2019]

University Scholarship

University of Milano-Bicocca [Nov 2018]

University Scholarship

University of Milano-Bicocca [Nov 2017]

University Scholarship

University of Milano-Bicocca [Nov 2016]

Certificate of Participation - Cisco NetRiders

Cisco [Jun 2015]

'First Italian placed in the international competition Cisco NetRiders 2015'.

<https://www.hensemberger.edu.it/cisco-netriders-2015/>

Letter of Merit - Cisco CCNA (Routing and Switching)

Cisco [May 2015]

Letter of Merit - Cisco IT Essentials

Cisco [May 2015]

Certificate of Merit - ECDL

Italian Association for Informatics and Automatic Computing (AICA) [May 2015]

'For the exceptional result obtained in the certification path'.

PROJECTS

Word Embeddings Comparison for Sarcasm Detection

[Dec 2020 – Feb 2021]

In this project, we propose a Deep Learning architecture for Sarcasm Detection, while utilizing pre-trained Word Embeddings from three well-known models: Word2Vec, fastText and Glove.

https://github.com/frenkowski/Word_Embeddings_Comparison_for_Sarcasm_Detection

Deep Learning for Bacteria Identification using Raman Spectroscopy

[Oct 2020 – Feb 2021]

Here we apply Deep Learning approaches to accurately identify 30 common bacterial pathogens, reaching an average isolate-level accuracy exceeding 78%, and an antibiotic treatment identification accuracy of 95%.

https://github.com/frenkowski/Deep_Learning_for_Bacteria_Identification_using_Raman_Spectroscopy

Transfer Learning with ImageNet

[Nov 2020 – Dec 2020]

The task of the project is Transfer Learning using a CNN pretrained on ImageNet.

https://github.com/frenkowski/Transfer_Learning_with_ImageNet

CNN for MNIST Handwritten Digit Classification

[Nov 2020 – Dec 2020]

The task of the project is the design of a CNN architecture and its training.

https://github.com/frenkowski/CNN_for_MNIST_Handwritten_Digit_Classification

Default Credit Payment Prediction

[Oct 2020 – Nov 2020]

The project consists in the prediction of default payments using a Neural Network.

https://github.com/frenkowski/Default_Credit_Payment_Prediction

Airbnb Price Prediction

[Sep 2020 – Oct 2020]

The project consists in the prediction of the price of a private room or an entire apartment using a Neural Network.

https://github.com/frenkowski/Airbnb_Price_Prediction

Supermarket Queue Simulation

[May 2020 – Jul 2020]

This project aims to study and compare the differences between the types of queues daily used inside the supermarkets.

https://github.com/frenkowski/Supermarket_Queue_Simulation

Multiple Sequence Alignment (MSA) Analysis of SARS-Cov2 Sequences

[Mar 2020 – Jul 2020]

In this report we analyze Multiple Sequence Alignments (MSAs) obtained from 18 samples of European COVID-19 patients and we compare against 3 samples from China, in order to figure out how similar or different they are. We also present our tool for detecting differences in a MSA and building a phylogenetic tree from a subset of these differences.

https://github.com/frenkowski/MSA_SARS-CoV-2

Human Disease Network

[Apr 2020 – Jun 2020]

This study analyzes a known biological network, the 'Human Disease Network', to capture the most important properties, through a Network Analysis activity, and to evaluate the connections between the different nodes, through Community Detection techniques.

https://github.com/frenkowski/Human_Disease_Network

Image Compression via DCT

[Apr 2020 – Jun 2020]

In this report we discuss our implementation of the Discrete Cosine Transform (DCT) in one and two dimension. We then compare our implementations in terms of execution time to the ones provided by Scipy. Finally, we present our GUI that compresses a greyscale bitmap image via a DCT2-based algorithm, while also providing a side-by-side comparison with the original image.

https://github.com/frenkowski/Image_Compression_via_DCT

Comparison of Sparse Linear Systems solvers via Cholesky Decomposition

[Apr 2020 – Jun 2020]

In this report we analyze and compare four different implementations of Sparse Linear Systems solvers that make use of the Cholesky Decomposition for sparse, symmetric and positive defined matrices. We used MATLAB, C++, Python and R. For each environment, we will take into consideration its execution time, memory usage and relative error. We will also make comparisons between Windows and Linux.

https://github.com/frenkowski/Cholesky_Decomposition

Trump Twitter Archive

[Apr 2020 – May 2020]

The task of the project is Sentiment Analysis using Trump Twitter Archive.

https://github.com/frenkowski/Trump_Twitter_Archive

Madrid Train Bombing Network

[Mar 2020 – Apr 2020]

The task of the project is Network Centrality using Madrid Train Bombing Network.

https://github.com/frenkowski/Madrid_Train_Bombing_Network

Machine Learning aided Record Linkage

[Sep 2019 – Feb 2020]

In this project we investigate some possible Machine Learning applications to Record Linkage (and Data Deduplication) by doing two different experiments.

https://github.com/frenkowski/ML_aided_RecordLinkage

Heart Disease UCI

[Sep 2019 – Jan 2020]

The proposed project aims to compare different Machine Learning algorithms, measuring their respective performance.

<https://www.kaggle.com/frenkowski/heart-disease-comparison-of-ml-algorithms>

Reinforcement Learning - Atari Games

[Oct 2018 – Jul 2019]

This guide aims to illustrate the steps needed to train a Reinforcement Learning agent to learn how to play different Atari 2600 videogames. The results will be part of the talk, curated by Professor Fabio Stella, entitled 'How to work with data: languages for machine intelligence' which will be held on 21st December 2018 at the University of Milano-Bicocca.

https://github.com/frenkowski/Atari_Games_Reinforcement_Learning

Handwritten Digit Recognition - Android App

[Aug 2018 – Oct 2018]

Handwritten Digit Recognition is an App that recognizes a digit drawn by a user via Deep Learning techniques.

<https://play.google.com/store/apps/details?id=it.frenkowski.digitrecognition&hl=it&ah=8DTSI1l8WpHDkihFZSg9llK4XRQ>

COURSES

Specific training in the prevention of health and safety risks on job places

[Feb 2021]

AnciLab

General training in the prevention of health and safety risks on job places

[Feb 2021]

AnciLab

Course D.lgs. 231/2001

[Dec 2020]

ITS Angelo Rizzoli

Back to University Safely: anti-COVID-19 measures

[Sep 2020]

University of Milano-Bicocca

<https://bestr.it/award/show/lvYou-rSSrCmrzCcOmKHaA>

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B2 READING C1 WRITING C1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

DRIVING LICENCE

Driving Licence: B

In compliance with the GDPR and the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.

Monza, 1 Nov 2022

Stranieri Francesco