

# Federico Mazzoni

*AI and Data Analysis*



Male 20 Feb 1995

Via Privata Bianchi 6 Pisa, Italy

mazzoni.federico1@gmail.com

+39 3334850927 LinkedIn

GitHub Project Portfolio

## LANGUAGES

**Italian**

Mother tongue

**English**

FCE - C1

**German**

Fit - A2



## PROGRAMMING & QUERY LANGUAGES

**Python**

Skillful

**Java**

Good Knowledge

**R**

Good Knowledge

**JavaScript**

Good Knowledge

**Spark**

Good Knowledge

**SQL**

Beginner

**MDX**

Beginner



## PROFESSIONAL EXPERIENCE

### Fellow at National PhD Program in Artificial Intelligence

University of Pisa

2022 – present | Pisa, Italy

I focused on hybrid human-machine decision-making.

- Understanding the behavior of a human decision-maker;
- Envisioning a personal assistant helping the human user with the decisions;
- Making the assistant an independent human surrogate.

### Academic Tutor and Supervisor

University of Pisa

2021 – 2023 | Pisa, Italy

I held lectures, helped students, and examined them. I also supervised the Master's thesis *SafeGen: A Data-Anonymization Fairness-Enhancing Framework*.

### Freelance Data Analyst

2022 | Pisa, Italy

As a freelance, I worked on a recommendation system.

- Content-based approach, extracting information from reviews with the VADER NLP algorithm;
- Collaborative filtering approach, employing the Python "Surprise!" library.

### Trainee

University of Pisa

2022 | Pisa, Italy

Traineeship focused on pre-processing for outlier detection.

### Creative Director and Writer

Emergency / Tunué

2019 – 2020 | Milan / Latina, Italy

I wrote the script and supervised the artists for the graphic novel project *I colori di una nuova vita* .

### Writer

Cassiopea Production

2018 – 2019 | Rome, Italy

I wrote seven promotional shorts for the European Union.



## EDUCATION

### Summer School – Deep Learning

SDU – University of Southern Denmark

2023 | Odense, Denmark

### Summer School – AI & Society

University of Pisa

2023 | La Maddalena, Italy

School focused on the ethical ramifications of AI. With other colleagues, I proposed the project "IUS - Intelligent University System", which won the project work contest.

---

## DIGITAL SKILLS

---

### Statistical analysis and data visualization

#### Dataset pre-processing

Imbalanced learning, PCA, fairness, outliers, and missing values

#### Classification, regression, and clustering

Also with incremental learning

#### Model evaluation and explanation

#### Key libraries:

Pandas, Sci-Kit Learn, TensorFlow, PyTorch, NetworkX, NLTK, DEAP, Matplotlib, Seaborn, RiverML

#### Fields:

Tabular data, time series, texts, networks

---

## SOFT SKILLS

---

- Presentation
- Lateral Thinking
- Teamwork
- Stress Management
- Creativity
- Brainstorming
- Commitment

---

## INTERESTS

---

- Writing
- Acting
- Movies
- Games
- Cooking

---

## OTHER

---


### Improvisational Theatre

2015 – 2017 | Pisa, Italy

I played improvisational theatre with *Arsenale Delle Apparizioni*. 

This experience helped me understand how to speak in public and how to react to unexpected events.


### Master's Degree in Digital Humanities | 110 cum laude

University of Pisa 

2020 – 2022 | Pisa, Italy

Data Science and Language Technologies (NLP)

**Relevant Exams:** Data Mining, Social Network Analysis, Text Analytics, Distributed Data Analysis and Mining, Semantic Web, Laboratory of Data Science, Applied and Computational Linguistics

**Master's Thesis:** *Genetic Fairness-Enhancing Data Generation Framework* 


- Proposing *GenFair*, an algorithm to remove discrimination towards demographic groups in training datasets, thus mitigating the bias of models trained on them;
- *GenFair* employs a genetic algorithm to create synthetic data, enhancing the original dataset;
- Good experimental results, overcoming several limitations of state-of-art competitors.

### Specialization Course in Scriptwriting | 110 cum laude

Accademia Nazionale d'Arte Drammatica Silvio d'Amico 

2017 – 2019 | Rome, Italy

### Bachelor's Degree in Philosophy | 110 cum laude

University of Pisa 

2014 – 2017 | Pisa, Italy

---

## SCIENTIFIC PUBLICATIONS

---

### F. Mazzoni, R. Guidotti, A. Malizia - A Frank System for Co-Evolutionary Hybrid Decision-Making

*Symposium on Intelligent Data Analysis*

2023 - Submitted

### F. Mazzoni, M. Manerba, M. Cinquini, R. Guidotti - GenFair: A Genetic Fairness-Enhancing Data Generation Framework

*International Conference on Discovery Science*

2023 - Accepted

### F. Mazzoni, A. Failla, S. Citraro - Quantifying and Reducing Marginalization in Networks: a Genetic Approach

*International Conference for Computational Social Science*

2022 - Accepted

### A. Failla, F. Mazzoni, S. Citraro - Attribute-aware Community Events in Feature-rich Dynamic Networks

*The 11th International Conference on Complex Networks and Their Applications - Book of Abstracts*

2022 - Accepted

---

## DECLARATION

---

I authorize the processing of personal data contained in my curriculum vitae based on art. 13 GDPR 679/16.

*Federico Mazzoni*

---