

# Clara Fazzari

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## Short Bio

Graduate in Bioinformatics with hands-on experience in computational neuro-anatomy and evolutionary genetics. Looking to apply my programming and data analysis skills to bioinformatics research or pharmaceutical data science.

## Education

**Medical University of Vienna** Vienna, Austria  
Center for Brain Research, Div. of Neuronal Cell Biology Haubensak lab  
Erasmus+ Traineeship - Master Thesis Internship Sept 2023 – Feb 2024  
Supervisors Univ.-Prof. Wulf Haubensak, Dr. Lukasz Piszczek  
Thesis Retracing the evolution of the human socio-affective traits through computational archaeology

**Università degli Studi di Roma Tor Vergata** Rome, Italy  
Master's Student in Bioinformatics 2020 – 2024  
Grade (Italian) 103

**Università di Pisa** Pisa, Italy  
Bachelor Degree in Biological Sciences 2020  
Thesis Potential application of liquid biopsies in Multiple Myeloma patients  
Grade (Italian) 87

## Relevant Exams

**Laboratory of Programming**  
Developed an application in C and Python, implementing complex algorithms for analytical tasks.

**Biomedical Statistics**  
Basic theoretical and practical probabilistic and statistical methods and models used in bioinformatics.

**Genomics and fundamentals of statistical genetics**  
Gene expression regulation, translational and post-translational regulation mechanisms; Systems biology and omic approaches; DNA sequencing and proteomics technologies; how to analyse large-scale data sets.

## Elements of machine learning methods - attended classes

Bayesian statistics and learning, graphical models, Bayesian networks, supervised learning, regression (linear and nonlinear), regularization, feature selection, linear classification (Fisher LDA, perceptron), naive Bayes, generative models for classification, discriminative models for classification (logistic regression), support vector machines, and kernel methods.

## Projects

### Programming project

[Python programming group project - Github link](#)

Personal Key Indicators of Heart Disease: We used data from the 2020 annual CDC survey, which includes health information from 400,000 adults, and applied machine learning methods to detect patterns that can predict a patient's condition.

## Work experience

### Poster presenter

25-29 June 2024

FENS Forum 2024

Vienna, Austria

Presented a research poster based on my master thesis at the conference, engaging with peers and experts in the field.

### Master thesis intern

Sept 23 - Feb 24

Division of Neuronal Cell Biology at the Medical University of Vienna

Thesis Retracing the evolution of the human socio-affective traits through computational archaeology

The project explores the evolution of the human brain over 60 million years, overcoming challenges related to the inaccessibility of ancient ancestors' brains. Building on previous work, the aim is to adapt scripts for analyzing the functional features of archaic brains using new computational resources and expanding data sets.

### Science Communicator

2015-2020

Associazione studentesca MaDE@DM

Pisa, Italy

I organized exhibitions, workshops, and scientific dissemination events with the MaDE@DM student association. I held the position of president of the association in 2018.

### Volunteer

11-14 Oct 2018

Associazione Fare Spazio Ai Giovani

Pisa, Italy

Supporting the organization of the "Internet Festival 2018": welcoming and assisting visitors.

### Botanical guide

15-21 July 2019

Associazione Aquilegia

Villa Collemandina (LU), Italy

Management and Visitor's Guide of the Maria Ansaldi Botanical Garden at Pania di Corfino in the Tuscan Apuan Alps. Responsibilities include welcoming visitors and providing guidance throughout their visit to the Botanical Garden.

**Science Communicator**

27 Oct - 6 Nov 2016

Associazione Festival della Scienza

Genoa, Italy

Guiding visitors and explaining content and workshops at the scientific exhibition of the 'Festival della Scienza 2016'.

**Laboratory of experimental biology**

2016

[Laboratory report - link](#)

Department of Genetics at the University of Pisa

Analysis evaluation of the chromosome counting of cells blocked in metaphase, obtained by treatment of a lymphocyte culture with a genotoxic agent; comparing the results with those obtained from untreated lymphocytes of the same culture.

Skills

**Technical**

Proficient in: R, Python, C, Ruby, Bash, MATLAB, PHP, HTML, CSS, SQL, Markdown, and LaTeX.

**Bioinformatics tools**

Proficient in using basic bioinformatics tools and software such as Cytoscapes and CellDesigner.

**Languages**

Italian (mother tongue), English (advanced), French (scholastic).

Soft skills

**Communication (writing/speaking)**

Scientific presentations, exhibitions, and workshops organization.

**Teamwork, Organizational**

Able to work as part of a team, organize virtual meetings, open to criticism, and manage conflicts.

**Problem-solving, Stress and Time management**

Critically adapt projects to changes, address problems and deal with deadlines.

Other interests

I love music and have been a soprano in the choir at the Università di Pisa for two years. I also enjoy reading novels and science books, listening to podcasts, beading, and crocheting. Additionally, I like walking in nature and spending time outdoors.