

# Alessia Pellegri

## Curriculum Vitae

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## Education

2022-2024 **Master's Degree in Applied Mathematics, University of Genoa.**

Thesis title: Deep Learning Techniques for Solar Flare Prediction

Grade: 110L/110

2017-2021 **First Degree in Mathematics, University of Pisa.**

Thesis title: Topology of Surfaces in Linear Algebra Modulo 2

Grade: 110/110

2011-2016 **High School Diploma, La Spezia.**

Liceo Classico Lorenzo Costa

Grade: 100/100

## Work Experience

2024 **Research Fellowship, Politecnico di Torino**

"Numerical Methods and Artificial Intelligence for Solar Physics Problems"

Duration: 6 months

2024-2027 **Ph.D. in Mathematical Methods for Data Analysis, University of Genoa**

Start Date: November 2024

Duration: 3 years

Research Topic: Advanced Biomedical Imaging through the Integration of Mathematical Modeling, Computational Analysis, and Machine Learning Techniques.

In collaboration with ASG S.p.A. and New York University (NYU).

## Professional Interests

- ▷ Machine Learning and Deep Learning techniques applied to solar physics problems and biomedical imaging reconstructions;
- ▷ Indirect imaging applied to various fields:
  - Astrophysics (study of solar flares)
  - Medicine (X-ray tomography, MRI, and PET)

## Skills

Programming Languages	Python, SQL, JavaScript, MATLAB, C, C++
Software	LaTeX, Microsoft Office, Microsoft Excel, PowerPoint
Operating Systems	Windows, Linux
Languages	English

## Abilities

- ▷ Ability to adapt to new situations
- ▷ Teamwork skills
- ▷ Determination in solving proposed problems