FLAVIA AMADIO

Data Scientist

Astrophysics researcher turned data scientist, proficient in predictive modeling, simulations and data engineering. Motivated to apply rigorous data analysis to tackle real-world challenges, with a commitment to advancing solutions that enhance environmental stewardship, economic resilience and social well-being.

CONTACT ME

- +393460953030
- flavia-a@live.it
- Leuven, 3000, Belgium
- Driving license B

HARD SKILLS

Programming languages: Python, Fortran, C, Pascal, Matlab

Modeling: Predictive and Forward Modeling | Statistical Modeling | Physics and Chemistry Simulations (1D, 2D)

Data Processing: ETL Pipelines | Data Visualization

Cloud computing: High-Performance Computing (HPC)

AI: Machine Learning, Deep learning (tensorflow, pytorch)

Version Control: GitHub

Data Governance and Ethics: Responsible conduct in Reaserch

OS: Linux | Windows | macOS

Communication: Scientific reporting | Technical writing | Presentation skills

SOFT SKILLS

Problem solving
Critical thinking
Emotional intelligence
Teamwork
Planning and organisation

LANGUAGES

Italian : native
English : fluent
Spanish: conversational
French: conversational

HOBBIES

Volunteering at a local dog shelter, Reading, Arts and crafts, Hiking

WORK EXPERIENCE

PHD RESEARCHER | JAN 2023 - AUG 2024

KU Leuven

- Conducted **comparative analysis** across multiple **atmospheric simulation** models using **Python** and **statistical evaluation metrics**, collaborating with the Copenhagen team.
- **Teaching assistant** for the course in 'Stellar Atmospheres and Stellar Winds' for the Master in Astrophysics and for the course Master in Space Studies for the course in 'Space Exploration'.

PHD RESEARCHER | SEP 2020 - JAN 2023

University of Copenhagen (UCPH)

- Expanded **legacy Fortran codebases** to integrate new simulation methods, deepening my understanding of **computational modeling** and large scientific **code structures**.
- Completed specialised courses and workshops on astronomical **data processing**, which I applied directly to real telescope data from observations at the Danish 1.54 m Telescope in La Silla, Chile.
- **Organised** the Journal Club for the GLOBE departement at UCPH and the weekly research team meetings.

MASTER THESIS INTERNSHIP| JUN-NOV 2019

Autonomous University of Barcelona

- Developed a custom **MCMC model in Python** to correct astronomical data for stellar variability noise.
- Built and tested **simulations** replicating real observational datasets, achieving improved transit detection rates.
- **Documented** methodologies and **presented** findings to research stakeholders.

TUTORING | 2012 - 2019

self-employed

I tutored younger students during my studies, in **scientific disciplines** and **english**, both at high school and university level

EDUCATION

MASTER IN ASTROPHYSICS | 2017-2019

Sapienza University of Rome

Grade 110/110 cum laude
Thesis on the effect of stellar activity on the transit depth of an exoplanet. I carried out part of this work during a semester abroad in the Universitat Autonoma de Barcelona, at the Institute of Space Science (ICE - CSIC).

BACHELOR IN PHYSICS | 2013-2017

Sapienza University of Rome

Grade 106/110
Thesis direct imaging methods of exoplanets.