

# Gaëtan Fichet de Clairfontaine, PhD

PhD astrophysicist with postdoctoral research experience in large-scale numerical simulations and data analysis. Now expanding expertise into machine learning and business analytics through self-directed projects, applying Python, scikit-learn, SQL, and Metabase to real-world datasets. Combines scientific rigor with modern data tools to deliver insights and reproducible results.



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### WORK EXPERIENCE

Postdoctoral Researcher (Data-intensive R&D) — University of Valencia, Spain 2024–Present

- Built Python pipelines for large datasets (ingest · clean · analyze · visualize).
- Ran **HPC experiments** (SLURM job arrays), tracked metrics, automated reports.
- Applied statistical evaluation & uncertainty analysis to compare outputs with reference data.

Postdoctoral Researcher (Modeling & Analytics) — University of Würzburg, Germany (2022–2024)

- Combined simulation outputs and observational datasets, standardizing formats for analysis.
- Delivered reproducible pipelines (scripts, notebooks, CLI tools) with documentation.
- Used Git and collaborative workflows in an international research team.

## Selected Data & ML Projects

- Retail Analytics Dashboard → built with PostgreSQL + Metabase to track KPIs (revenue, customers, inventory).
- Predictive Modeling → applied scikit-learn (classification, regression, cross-validation) to open datasets.
- SQL for Business Data → querying, cleaning, and joining relational datasets for reporting.

## PROFESSIONAL STRENGTHS

Analytical thinking  $\cdot$  Problem solving  $\cdot$  Technical adaptability  $\cdot$  Communication  $\cdot$  Collaboration  $\cdot$  Mentoring

#### TECHNICAL SKILLS

**Language:** French (native), English (fluent), Spanish (notion), Italian (notion) and German (notion).

**Programming Language:** Python, SQL, Fortran. **Tools:** NumPy, SciPy, scikit-learn, Git, Jupyter, LaTeX.

**Platforms:** Windows, MacOS & Linux. **Compute:** Slurm, HPC Clusters.

#### EDUCATION

Bachelor in General Physics
University of Normandie, Caen, France | 1 2014 - 2017

Master in Astronomy & Astrophysics

Observatory of Paris, Paris, France | 2017 - 2019

PhD in Astronomy & Astrophysics

Observatory of Paris, Paris, France | 2019 - 2022

#### INTERESTS

Endlessly curious, I enjoy exploring connections between science, history, and culture. I'm passionate about geopolitics, artistic storytelling (from cinema to video games), and music — both as a listener and musician. A devoted Beatles enthusiast, I play both guitar and bass.