



# Mathieu Isoard

PhD | Data science



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## Certifications

2024 – XCS224W Machine learning with graphs  
Stanford Online

## Technical Skills

Pandas, NumPy, Scikit-learn, PyTorch, PyTorch Geometrics, TensorFlow, Keras, Docker

## Languages

French (C2)   
English (C1)   
German (B1)

I am a former PhD-trained physicist transitioning to data science, with hands-on experience in machine learning, deep learning, and deployment. What motivates me the most is to design and implement concrete solutions to solve challenging problems. Throughout my career, I have successfully applied advanced analytical methods and AI solutions to tackle complex data problems from data analysis to deployment with rigor, creativity, and impact.

## Experience

2025

### Senior AI Researcher @ CRIION (Intelligent Oncology)

- Led the development of combined supervised and unsupervised ML methods to align heterogeneous single-cell datasets, significantly improving cell annotation accuracy.
- Translated research into production by building and deploying an end-to-end ML pipeline with a web app (Python, FastAPI, Next.js, Docker), enabling non-ML researchers to run analyses autonomously.

2022 - 2024

### Post-doc @ LKB, Sorbonne Université – Quantum Computing Group

- Developed data analysis and deep learning methods to extract fundamental properties from noisy experimental data.
- Designed a deep neural network capable of detecting a key quantum resource for quantum computing from only a few experimental measurements, vastly outperforming existing data-hungry and computationally expensive methods.

## Education

2017 - 2020, Paris-Saclay University

### PhD in theoretical Physics and applied Maths

My PhD focused on (i) uncovering quantum effects in hydrodynamic analog black holes using noisy experimental data, and (ii) solving and numerically simulating fundamental hydrodynamic equations, including shock-wave dynamics.

2013 - 2017, ENS Paris-Saclay and ENS Ulm

Bachelor ( ENS Paris-Saclay) and Master degree (ENS Ulm, ICFP program)

## Skills

### What I do

- Project management
- Data analysis and visualisation
- AI integration & deployment
- Communication & talks

### What I Use

- Python
- ML/DL libraries
- DevOps tools

## Interests & Personal projects

- Sport ( weightlifting and running) became a must in my life where I can apply my core beliefs to achieve success: motivation and self-discipline.
- My current personal projects:
  - ★ Design a ready-to-use wellness platform for my family: [www.equilibrecorpsesprit.com](https://www.equilibrecorpsesprit.com)
  - ★ Design and deploy an AI-powered mobile app to track gym workout progress: [ai-training-dashboard.vercel.app](https://ai-training-dashboard.vercel.app)