



# Malek Senoussi, PhD

Data Scientist  
Machine Learning Researcher & Engineer  
Professor



## Selected projects

### Analysis of large-scale datasets

Develop models to classify single-cell RNA-seq data (+20K features), improving cell type and gene expression identification.

### Interactive Data Visualization

Design and develop interactive visual dashboards using Plotly to simplify data exploration and interpretation.

### Large-Scale model training on clusters

Deploy and train thousands of deep learning models on high-performance computing clusters, optimizing performance and resources.



## Work experience

2025

### Sailing

Skipper and volunteer sailor for associations in Mediterranean

2024

### PhD researcher

at LIS and Centuri Laboratory, Marseille, France.

Research in Machine Learning applied to biology. Scientific publications in different fields: ↗Partial label learning, ↗Hierarchical novel class discovery and ↗Random walk.

2023

### Supervisor of research internships

at LIS, Marseille, France.

Co-supervision of research projects of students from engineering school and university.

2023

### Professor in preparatory classes

in Thiers High School, Marseille, France.

Oral examination in prep class MPSI

2020

### Research internship

at LIS, Marseille, France.

Mathematical modeling of the embryogenesis of *C. elegans*.

2018

### Teacher in middle school

in Chateau Forbin, Marseilleveyre, Sylvain Menu, Marseille, France.

Professor of Mathematics

2017



## Education

2024

### PhD in Mathematics and Computer Science

↗Classification of single cell RNA sequencing.

Aix-Marseille University

Keywords : Deep Learning, Machine Learning, Statistics.

2020

### Master 2 Mathematics and Applications CEPS

Aix Marseille University.

Theoretical skills: Probability and Statistics.

**Applications:** Statistical methods for Brain Imaging, Machine Learning theory, Statistics in Pharmacology.



## Profile

Doctor in Mathematics and Computer Science applied to multidisciplinary and challenging environments. Quick to learn new technologies and committed to delivering high-quality results. Enjoys sharing knowledge and thrives in collaborative settings.



## Contact



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## Technical Skills

### Languages & Tools

- Languages & Tools
  - Python, Bash, Docker, Git, LaTeX
  - Libraries
    - PyTorch, Scikit-learn, NumPy, Pandas, Dask, Dash, Matplotlib, Seaborn
    - Domains
      - Deep Learning, Machine Learning, Data Analysis, Statistical Modeling, HPC



## Languages

French

Native

English

Fluent C1

Italian

Basic B1



## About me

Oud player performing Greek and Arabic music repertoires.

Passionate about sailing, Mediterranean culture, and traditional music.

Enjoys exploring new cultures through travels.