

CYRIL MATTHEY-DORET

Data science engineer at the Swiss Data Science Center

@ cmdoret@mailbox.org

📍 Lausanne, Switzerland

in cmdoret

🔗 cmdoret

🆔 0000-0002-1126-1535



SUMMARY

I love developing software and algorithms to help researchers extract useful knowledge from biological data. I strive to apply my skills to the advancement of open data and reproducibility of science.

WORK EXPERIENCE

Data science engineer

Swiss Data Science Center

📅 Jan 2022 – Present

📍 Lausanne, Switzerland

- Collaborate with researchers to improve research software practices.
- Work with hospitals to build a FAIR national metadata registry.
- Promote and teach good data management practices.

PhD researcher in Computational Biology

Institut Pasteur

📅 Oct 2018 – Dec 2021

📍 France, Paris

- Developed a pattern detection algorithm in Hi-C contact maps.
- Generated chromosome-level genome assembly for the amoeba *A. castellanii*.
- Quantify 3D chromatin changes following infection by intracellular bacteria.
- Implemented good software practices to transform the lab Hi-C processing pipeline.

Junior Bioinformatician

University of Lausanne

📅 Mar 2018 – Jul 2018

📍 Switzerland, Lausanne

- Setup a reproducible pipeline to analyze whole genome sequencing data.
- Communicate results with biologist collaborators and team leader

Helpdesk assistant

University of Lausanne

📅 Aug 2017 – Aug 2018

📍 Switzerland, Lausanne

- Remote and in-person IT support using the OTRS ticketing service and TeamViewer.
- Developed automation scripts for common processes (backups, integrity checks, ...)

EDUCATION

PhD in computational biology

Sorbonne University

📅 Oct 2018 – Dec 2021

📍 France, Paris

Master in Molecular Life Sciences: Bioinformatics

University of Lausanne

📅 Sept 2016 – Jan 2018

📍 Switzerland, Lausanne

Bachelor in Biology

University of Lausanne

📅 Sept 2013 – Jul 2016

📍 Switzerland, Lausanne

SKILLS

Technical knowledge: Genomics, Statistics, Machine Learning, Data engineering

Transferable Skills: Project management, Team work, Oral communication, Scientific writing

Programming: Python, R, Bash, Go

Tools: Snakemake, Nextflow, Bioconductor, Keras, tensorflow, MySQL

Software development: CI/CD, HPC, Containers, Distributed computing, Unit testing

ACHIEVEMENTS



Grants

- Selected for the PhD fellowship at the University of Lausanne.
- Granted the Pasteur Paris University International PhD fellowship



Scientific communications

- Presentations at national and international conferences.
- Author in 5 scientific publications in international journals.



Teaching

- Lecturer at EPFL for the Large-scale data science course
- Consultant and Workshop instructor for Physalia courses
- Supervised 2 Master students

LANGUAGES

French Native

English Fluent

German B1

Mandarin Chinese A2