

# XAVIER DELFOSSE

## Data Scientist & Life Science Engineer

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## EXPERIENCE

### Independent Contractor: Machine Learning and Data Science Specialist & Lead Data team

#### Tradepedia

- May 2024 – Ongoing    Remotely
- Designed and developed a reinforcement learning-based model for stock market analysis and prediction.
  - Deployed MLflow for model tracking and versioning; served models via custom FastAPI endpoints.
  - Mentored junior data scientists and managed team collaboration via GitHub.
  - Assumed project management responsibilities, including backlog and roadmap planning.

### Bioprocess Development Scientist

#### Securecell AG

- Oct 2021 – August 2024    Urdorf, ZH
- Developed and tested automated control strategies for mammalian and microbial cell cultures using real-time process data.
  - Integrated convolutional neural networks and machine learning models into bioprocess pipelines.
  - Authored and executed validation test plans for new bioprocessing products.
  - Led various bioprocess experiments (cell culture and fermentation) and contributed to the Bioprocess 4.0 product roadmap.

### Internship: Scientist in Quality Control

#### Société Suisse des Explosifs

- 2017 – 2018    Gamsen, VS
- Worked daily as a Lab Scientist in a GMP environment.
  - Led the integration of online analysis tools into the quality control lab's workflows.

## THESIS PROJECTS

### Master Thesis

- “Implementation and usage of an electronic nose for the monitoring of bioprocesses,” 2024.

### Bachelor Thesis

- “Characterization, optimization, and validation of an autosampling unit for microbial fermentation processes,” 2021.

## EDUCATION

### M.S. in Applied Computational Life Sciences

#### Zurich University of Applied Sciences

2021 – August 2024    Wädenswil

### B.S. in Life Science Technologies option Biotechnology

#### HES-SO

2018 – 2021    Sion

## HOBBIES

**Sports**  
Bouldering, Biking, Roller Skating and Calisthenics

**Games**  
Competitive and certified judge for Pokémon TCG (2009–2022)

**Others**  
Homebrewer, hobbyist with Arduino and Raspberry, 3D printing

## SKILLS

Python

R

SQL

Matlab

PyTorch

TensorFlow

Scikit-learn

ML

DL

RL

NLP

LLMs

LangChain

Langflow

MARL

MLflow

Git

MODDE

LabX

Lucillus

USP

DSP

PAT

HPLC

GC

fermentation

cell culture

PCR

Team leadership

project ownership

Science Communication

analytical thinking

## LANGUAGES

French

English

German