
WORK EXPERIENCE

Assistant Nature Manager

April 2024 — Present

Lausanne Employment Service, Lausanne

Affiliation in the context of the civil service, I help with participants that need social integration. With them, we fight against invasive plants, construct birdhouses, beehotels, etc.

Data Science Intern, Machine Learning Engineer

July 2022 — February 2024

Magma Learning, Lausanne

First as an intern working on my Master's thesis and then as a Machine Learning Engineer, I led the design, creation, deployment, and integration of our spaced repetition model. This involved extensive exploration, feature engineering, model training, and integration into the backend, with real-time inference capabilities in production. It allowed to significantly improve the personalization of our app, delivering content to users at optimal learning moments.

I played a pivotal role in backend development, including implementing NLP features and designing database models (PostgreSQL, DynamoDB). I also made significant improvements in the frontend, and the restructuring and migration of our services to AWS.

Keywords: Python, Machine Learning, NLP, TensorFlow, Keras, Backend development, AWS

Student Assistant

2020 — 2021

École polytechnique fédérale de Lausanne (EPFL)

Technical assistant, supervisor and Scrum Master for Bachelor students. This was in the context of programming courses, one in C++ and one in Python focusing on Data Mining and Machine Learning.

EDUCATION

Master's Degree in Data Science

2019 - 2022

École Polytechnique Fédérale de Lausanne (EPFL)

Coursework: Traditional Machine Learning, Deep Learning, Mathematical foundation of Data Science, Computer vision, Optimization for Machine Learning, Reinforcement Learning fundamentals, NLP

GPA: 5.36

Bachelor's Degree in Computer Science

2015 - 2019

École Polytechnique Fédérale de Lausanne (EPFL)

Coursework: Computer Architecture, Software Engineering, Compiler Construction, Database Systems, Stochastic Modeling, Fundamentals of Statistics, Machine Learning fundamentals, Distributed Processing, Graph Theory

GPA: 5.12

SKILLS

Communication

French (native speaker), English (C1)

Programming

Python (Numpy, Sklearn, Pandas, PyTorch, TensorFlow, OpenCV, etc.), SQL, Scala, C(++), Bash, \LaTeX

Tools

Strong Linux knowledge, AWS, Git, Docker, Spark, Scrum, Hadoop

PROJECTS

System Integration in Renku for Big Data

- Engineered an automatic setup for projects using Big Data frameworks (Hadoop, Hive, Spark) on the platform
- Contributed to Renku, open-source platform for collaborative Data Science with the Swiss Data Science Center

Keywords: Open Source, Linux, System Administration, Hadoop, Spark, Docker, Kubernetes

Dynamical System's Modelling for Tic Disorder

- Leveraged activity recognition techniques based on dynamical systems for direct tic detection on videos
- Used PCA and auto-encoders for the latent space mapping of the video frames
- Collaborated with researchers in Data Science and psychology at the John Hopkins university and the Swiss Data Science Center
- Formed rules for the data collection from patient at Hopkins university with the other researchers

Keywords: Dynamical Systems, Neural Network, Computer Vision, Latent Space Representation, PyTorch, OpenCV

Data Visualization on Coronavirus Evolution

- Created an interactive map of the world to visualize the evolution of COVID cases around the world
- Coded everything in JavaScript using the D3 library, except for the data wrangling done in Python