

# LUCA NYCKEES

Mathematician | Data Scientist | Software enthusiast

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in Luca Massimo Nyckees

🔗 LucaNyckees

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📍 Lausanne, Switzerland

📁 Data Science Portfolio



## WORK EXPERIENCE

### Data scientist | Quanthome SA

📅 August 2022 - now

📍 Lausanne, Switzerland

- Applying a comprehensive data science stack - database maintenance, machine learning engineering, workflow orchestration and continuous integration - to applications focused on financial data analysis, environmental data analysis and real estate market insights. Responsibilities involved supervising data science master students.

### Research developer | Lab of Topology and Neuroscience, EPFL

📅 August 2021 - February 2022

📍 Lausanne, Switzerland

- Making a survey in computational geometry about zigzag persistence (a tool in topological data analysis used to study point-cloud data) and creating a Streamlit web application. 🔗

### Data Science Intern | Lab of Topology and Neuroscience, EPFL

📅 December 2020 - August 2021

📍 Lausanne, Switzerland

- Studying and visualizing COVID19 tracing data through network and topological analysis. Creating an efficient pipeline and developing an interactive dashboard for data visualization.

### Teaching assistant | Department of mathematics, EPFL

📅 2020-2022

📍 Lausanne, Switzerland

- Teaching duties for various 1st, 2nd and 3rd year courses in the mathematics and informatics programs. These included group and individual tutoring, grading of exams and the creation of exercises.

## CURRICULAR PROJECTS

More information can be found in my [Data Science Portfolio](#).

### Statistical analysis of meteorological data | Python

📅 Autumn 2021

📍 Chair of Statistics, EPFL

- Web application for forecasting meteorological data. 🔗

### Graph label prediction for image classification | Python

📅 Autumn 2020

📍 SML course, EPFL

- Semi-supervised graph-based learning for image analysis. 🔗

### Deep learning for satellite image segmentation | Python

📅 Autumn 2020

📍 ML course, EPFL

- Studying CNN architectures for image segmentation.

### Topological data analysis with Morse theory | Python

📅 Spring 2021

📍 Topology Laboratory, EPFL

- Implementing parametric Morse theory algorithms. 🔗

## EDUCATION

### Master degree in Mathematics

📅 2020 - 2022

📍 EPFL, Lausanne

- Focus on topological data analysis.
- Extra-credits in the program of the data science master (ML courses and projects).

### Bachelor degree in Mathematics

📅 2017 - 2020

📍 EPFL, Lausanne

- Focus on algebraic geometry.

## COMPUTER SKILLS

### LANGUAGES

- Python : proficient
- SQL : proficient
- HTML/CSS/JS/TS : familiar
- C++ : familiar

### TOOLS/TECH

- Git Docker Continuous integration

### DATABASE

- SQL Postgres

### WEB DEVELOPMENT

- React HTML/CSS/JS Flask FastAPI Streamlit

### MATH LANGUAGES

- MATLAB R LaTeX

## TECHNICAL AREAS

Statistical machine learning & Geometry

Topological Data Analysis & Graph Theory

Machine Learning for Environmental Sciences

Mathematical Finance ESG Theory

## LANGUAGES

French | mother tongue

English

Italian

German

