



# Joe Schmit

Data Scientist

## Education

### Mathematics in Data Science (M.Sc.)

Technical University of Munich, 10/2021 - 10/2024

Machine Learning, Statistics, and Data Engineering (German Grade: 1.6)

Seminar: Computational Pathology

- Impact of adversarial attacks on various ML architectures

Thesis: Trajectory Prediction using Denoising Diffusion Models

- First diffusion-based model for trajectory prediction on graphs
- Used PyTorch for model development and diffusion algorithm

### Engineering Science (B.Sc.)

Technical University of Munich, 10/2018 - 09/2021

Interdisciplinary engineering program of 210 ECTS (German Grade: 2.1)

Thesis: Availability Analysis of Optical Sensors using Autonomous Driving Data

- Performance comparison between various optical sensors
- Road detection using OpenCV

### Management and Technology (B.Sc.)

Technical University of Munich, 10/2017 - 09/2018

### Highschool

Lycée de Garçons Luxembourg, 09/2010 - 06/2017

Mathematics, Physics, Chemistry, Biology (German Grade: 1.0)

## Professional Experience

### BMW, Data Analytics Intern

Munich, 09/2023 - 02/2024

Developed and deployed an ML model for noise classification using PyTorch, AWS, and Docker. Designed ETL pipelines using SQL, PySpark, and Palantir. Built a Plotly application for near real-time analysis of test drive data.

### Celonis, Product Management & Application Developer Intern

Munich, 09/2022 - 02/2023

Developed ETL pipelines with SQL to integrate data into the Celonis Cloud. Developed process mining applications using SQL, JavaScript, and HTML. Implemented GitHub actions for CI/CD.

### Technical University of Munich, Teaching Assistant

Munich, 04/2021 - 09/2022

Analysis for Computer Science, Data Analysis and Visualization in R, Discrete Probability Theory, Linear Algebra for Computer Science

### Technical University of Munich, Research Intern

Munich, 04/2020 - 08/2020

Benchmark testing a simulation engine in C++ for partial differential equations modeling natural disasters such as earthquakes and tsunamis.

## Personal Information

Place of Birth: Luxembourg

Date of Birth: 19.03.1998

## Technology

### Programming Languages

- Python: PyTorch, scikit-learn, OpenCV, numpy, pandas
- R: tidyverse, XGBoost
- SQL: MySQL
- C++

### Cloud

- AWS Sagemaker
- Azure
- Spark

### Data Visualization

- Plotly
- Tableau

### DevOps

- Git: CI/CD
- Docker

## Languages

German (native)

English (fluent)

French (fluent)

Luxembourgish (native)

Italian (B1)