



## Moritz Scherrmann

Born on April 04<sup>th</sup>, 1994  
in Merzig, Germany

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## Software Skills

### Languages:

Python ●●●●●  
 Matlab ●●●●●  
 Java ●●●○○  
 R ●●●○○

### Tools:

PyTorch ●●●●●  
 Transformers ●●●●●  
 Pandas ●●●●●  
 Docker ●●●●○  
 MS Office ●●●●○

### Databases:

OpenSearch ●●●○○  
 SQL ●●●○○

## Languages

German ●●●●●  
 English ●●●●○

## Interests

Road cycling, tennis,  
hiking and reading

# CURRICULUM VITAE

## Current Position

**PhD Student · LMU Munich** 04/2018 – present  
 Institute for Finance and Banking · Munich School of Management

Build and train end-to-end machine learning models for finance specific use cases in Python and Matlab, in particular models for processing and analyzing financial texts. Teaching and structuring finance Bachelor and Master lectures and tutorials. Supervising these including feedback communication and supervision. Responsible for IT issues at the chair.

References: ✉ Prof. Dr. Ralf Elsas

## Previous Positions

**Intern · KPMG AG** 02/2018 – 04/2018  
 Financial Services

Analyzing market, CVA, and liquidity risk, trading book requirements, and EBA stress testing. Employing neural networks to forecast the impact of DAX stress scenarios on diverse corporations.

**Intern · WST AG & Co.KG** 02/2015 – 04/2015  
 Audit

Support of annual audits according to German commercial law for medium-sized corporations.

## Education

### LMU Munich

Dr. oec. publ. 04/2018 – present

*Title Dissertation:* Essays in Machine Learning and Natural Language  
 Processing in Finance (see Machine Learning Projects)

Master of Business Research (MBR) · GPA: 1.0 04/2018 – 09/2020

*Title Thesis:* Training of a German Sentence-BERT Model  
 & Application on Ad Hoc Announcements

*Tools:* Python, PyTorch, Transformers, Sentence Transformers

M. Sc., Financial & Insurance Mathematics · GPA: 1.4 10/2016 – 02/2018

*Title Thesis:* Calibration of Currency Bond Price Curves by Multi-Curve  
 Regression Methods with Object-Oriented Implementation

*Tools:* Java, BLAS

*Note:* Contribution to the *finmath lib* Java library of Prof. Dr. Fries

B. Sc., Business Mathematics · GPA: 1.8 10/2012 – 08/2016

*Title Thesis:* Sensitivity of risk measures with regard to different  
 distribution parameters

*Tools:* R

## Machine Learning Projects

### German FinBERT: A German Pre-trained Language Model for Financial Textual Data

Pre-trained a specialized German BERT model for finance using 50+ GB of public German financial texts. Trained with MosaicML on Nvidia A100 via LRZ Linux Cluster. Outperformed generic German BERT across financial benchmarks.

### Multi-Label Topic Model for Financial Textual Data

Developed first German benchmark for financial text by manually creating a multi-label topic classification database. Collaborated with 9 financial experts for annotation. Implemented a Python labeling app for unique data structure. Fine-tuned various BERT models with PyTorch and transformers on the created dataset.

### Earnings Prediction Using Recurrent Neural Networks

Trained PyTorch RNN for predicting future quarterly and annual earnings-per-share of US companies. Designed for efficiency, it delivers more accurate and unbiased forecasts compared to cross-sectional models, outperforming analyst predictions for annual results.

### Export BERT models from Python to Matlab for NLP

A toolbox that exports pre-trained BERT transformer models from Python to Matlab. Extensively tested for exporting models from both PyTorch and TensorFlow, the toolbox supports pre-trained models for various downstream tasks, including text classification, token classification and Q&A.

  
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