Jan-Philipp von Bassewitz

Data Science student

Zurich, Switzerland

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Education

Invitation as Research Fellow: Harvard University, 2023
- Master thesis project under supervision of Prof. Dr. Koumoutsakos

M.Sc. Data Science: ETH Zurich, 2021 – 2023
- Courses: Advanced Machine Learning, Fundamentals of Mathematical Statistics, Big Data, Machine Perception, Optimization for Data Science, Data Science Lab, AI Center Projects
- 3 monthlong project on extracting branchless tree structure from RBG-D images of trees
- Implemented gradient boosting models to detect heart anomalies from ECG data
- Experience with big data technologies like *HDFS, MapReduce, Spark, HBase, S3*

B.Sc. Mechanical Engineering: ETH Zurich, 2018 – 2021
- Graduated in the top **2%** with an average grade of **5.57/6**
- Focused electives on applied mathematics and robotics
- Won **first place** out of 60 in *Innovation Project 2019*: *Product Owner* in agile competition
- Studied use of Gaussian Processes in control loop for robotics – report on my website

Professional Experience

Teaching Assistant: ETH Zurich, Jun 2019 – Jul 2021
- Taught *Linear Algebra I + II*, *Mechanics II*, *Technical Drawing and CAD*
- Demonstrated public speaking and teaching ability in front of up to 50 students
- Weekly production of teaching videos during lockdown that were viewed by 200+ students

Research and Development Intern: Magnetfabrik Bonn GmbH, Jun 2019 – Jul 2019
- Contributed to development of magnetic field measuring device through development, tool making and automation

Work and Travel: New Zealand, Nov 2017 – May 2018
- Learned independence, individual responsibility and tolerance during 6 months long solo trip
- Promoted after 1.5 months of working in a fine dining restaurant in Auckland
- 3 months individual trip over North and South Island

Technical Projects

B.Sc. Thesis: ETH Zurich, Nov 2017 – May 2018
- Title: *Learning Residual Neural ODE Dynamics of Partially and Fully Observed Systems*
- Implemented Neural ODEs, a novel architecture of deep neural networks that learn an underlying ODE of the observed dynamics using PyTorch
- Gained practical experience in deep learning
- Completed with final grade **6/6** - find code and thesis on my website

Skills

Programming: Python, C++, Matlab
Libraries: NumPy, PyTorch, pandas, scikit-learn, matplotlib
Languages: German (native), English (C1), Fench (B1)
Theory: Linear Algebra, Probability and Statistics, Machine Learning, Computational Science

Awards

Scholarship holder, Studienstiftung, 2020 – Now
Germany's most prestigious scholarship foundation

Advanced English for academic purposes C1-C2 - Final Grade 6/6, University of Zurich, Jun 2020
DPG Abiturpreis: Award of the *German Physical Society* for special achievements in physics

Personal Interests

Sport and fitness, reading (favorite book: *The Royal Game* by Stefan Zweig), art (painting and sketching), backpacking and getting to know different cultures, meditation