

Leonhard Spiegelberg

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EDUCATION

Brown University

Ph.D candidate in Computer Science.

Providence, RI

Expected May 2022

- Member of the Data Management Group, supervised by Dr. Tim Kraska
- Relevant Coursework: Compilers, Theory of Probability, Optimization Methods in Finance

Harvard University

S.M. in Computational Science & Engineering.

Cambridge, MA

May 2016

- Relevant Coursework: Advanced Machine Learning, Big Data Systems, Data Science, Computer Vision
- Awards: Winner of the 2016 IACS Computational Challenge (Development of a model to predict missing Human Flow data in buildings)

Technische Universitaet Muenchen

M.Sc. with Honors in Finance & Information Management.

Munich, Germany

September 2017

- Relevant Coursework: Decision Support Systems, Risk Management, Finance
- Awards: Scholar of the German National Academic Foundation and the Bavarian State for exceptional students

B.Sc. Computer Science, Minor in Mathematics.

November 2013

- Relevant Coursework: Probability Theory, Numerical Programming, Industrial Computer Vision

SKILLS

Programming languages: C/C++, Java, Scala, SQL, MATLAB, Python

GitHub: LeonhardFS

Frameworks: Machine Learning(TensorFlow, sklearn), Hadoop Stack(HDFS, Hive, HBase, Spark)

PROFESSIONAL EXPERIENCE

BMW AG

Data Engineer/Machine Learning Engineer

Munich, Germany

April 2017 – September 2017

Autonomous driving group, worked on developing software for a Hadoop based big data platform for providing data/model training capabilities to allow data processing of 20-40 TB per car per day

- Designed a domain-specific language to parse sensor data from lidar, radar, ultrasonic and MobilEye sensors
- Developed a raw converter for 12-bit red-clear-clear-clear images for low-level sensor fusion
- Designed architecture for distributed machine learning platform using TensorFlowOnSpark
- Implemented backend-functionality in Spark to enable ML engineers from Intel, MobilEye and BMW to access semi-structured data from data collector fleet

MENTAT INNOVATIONS LTD

Data Scientist

Munich/Athens/London, Europe

July 2016 – March 2017

Industrial Sensor Monitoring and Machine Vision

- Developed Machine Learning pipeline and model to classify faulty industrial valves by relying on internal sensor information, delivered prototype successfully to customer

UNIVERSITY OF ALBERTA

Research Assistant

Edmonton, AB

May 2013 – August 2013

Investigated ocean circulations in deep Labrador Sea using numerical methods

- Developed and implemented new algorithms in C++ to judge upon quality of differently filtered bathymetries
- Conducted various experiments on HPC system, created, processed and interpreted statistics of obtained simulation results with MATLAB

PUBLICATIONS

De Stefani, L., Spiegelberg, L.F., Kraska, T. and Upfal, E., 2018. VizRec: A framework for secure data exploration via visual representation. *arXiv preprint arXiv:1811.00602*. (under review)

Engel, J., Scherer, M. and Spiegelberg, L., 2017. One-factor lévy-frailty copulas with inhomogeneous trigger rates. In *Soft Methods for Data Science* (pp. 205-212). Springer, Cham