

MANUEL LANG

• ML Enthusiast • Software Engineer • Hackathon Hacker •

📍 Karlsruhe, Germany

in [linkedin.com/in/manuel-lang/](https://www.linkedin.com/in/manuel-lang/)

📄 github.com/manuel-lang

RECENT EXPERIENCE

Machine Learning Engineer & Co-Founder

reasonance

📅 November 2019 – Current 📍 Karlsruhe, Germany

- Optimized heat grid to reduce transport losses with Python (NumPy, Pandas, Numba), MongoDB, AWS and Kubernetes.
- Prototyped ML operations platform with React.js, Golang, Docker, Kubernetes, MongoDB and Cassandra.
- Automated data fusion process with Python (NumPy, Pandas).

Engineering Fellow

Tech4Germany

📅 August 2019 – Oct 2019 📍 Berlin, Germany

- Shaped the German "National Continuing Education Strategy" that focuses on continuing vocational education and training.
- Implemented an educational platform in cooperation with the Federal Ministry of Labour and Social Affairs (BMAS) using React, Flask, Sklearn and NLTK.
- Deployed the application on AWS with EC2, S3 and Elastic Beanstalk.

Machine Learning Freelancer

SICK

📅 March 2019 – July 2019 📍 Hamburg, Germany

- Implemented predictive maintenance for large sensor systems with time-series and causal forecasting with Python, sklearn and Keras.
- Predicted unexpected maintenance needs in average three weeks in advance of their occurrence.

Research Scholar

Carnegie Mellon University

📅 July 2018 – December 2018 📍 Pittsburgh, USA

- Proposed several algorithms for data-driven learning of clustering algorithms for text and image data.
- Implemented and optimized these algorithms with C++ and outperformed state-of-the-art clustering algorithms.
- Run large scale experiments with Docker and AWS Batch.

EDUCATION

Computer Science MSc., 1.3

Karlsruhe Institute of Technology

📅 October 2016 – September 2019

Computer Science BSc., 1.5

University of Applied Sciences Mannheim

📅 September 2012 – August 2016

PUBLICATIONS

- Balcan, Dick, Lang: Learning to Link, Eighth International Conference on Learning Representations (ICLR), 2020, <https://arxiv.org/abs/1907.00533>

HONORS & AWARDS

- Received Baden-Württemberg Scholarship for outstanding academic results.
- Received scholarship by Volkswagen Foundation to drive digitization for the German government.
- Admitted to the interACT program to research at CMU.
- Won 13 hackathons such as KPMG Ideation Challenge 2018, Hackdays Rhein-Neckar 2019 and Hackdays Rhein-Main 2019.

SKILLS & LANGUAGES

Machine Learning, CV

Python, C/C++, Sklearn, Unix

German, English

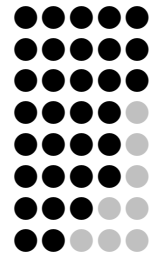
C#, Java, JavaScript

AWS, Caffe, Keras, TensorFlow

Docker, Kubernetes

Design Thinking, UX

French, Spanish



PROJECTS

- Music store ETL pipeline (Amazon Redshift, PostgreSQL, Cassandra, Spark, AirFlow)
- KAhilft.de - COVID19 volunteering platform (WordPress, PHP)
- Semantic search engine for unstructured data (NLTK, Sklearn, Flask, Node.js, Pug.js)
- Controlling robots with Augmented Reality (Unity3D, ROS)
- FC Bayern München fan engagement app (Cordova, Node.js)
- Talking IoT vegetable patch (Google Voice Kit)

VOLUNTARY WORK

- Mentor & juror at HackCMU 2018 (organized by Association for Computing Machinery).
- Speaker at KPMG AI Summit 2018.
- Coach at KPMG Ideation Challenge national and global finals 2019.
- Mentor at Jugend hackt Berlin.