Robin M. Schmidt

+49 (176) 23348219
robin.schmidt.97@web.de
Robin M. Schmidt
linkedin.com/in/schmidt-robin
github.com/SirRob1997
robinschmidt.netlify.com

Research and Work Experience

Max Planck Institute for Intelligent Systems & University of Tübingen Oct 2019 – May 2020
Research Internship in the Methods of Machine Learning Group of Prof. Dr. Philipp Hennig [Python, Shell, LaTeX]

- Benchmarked and compared 102 state-of-the-art Deep Learning optimizer choices and configurations
- Solved the problem of missing reference points for new optimization algorithms
- Enabled DeepOBS as a competitive benchmarking suite by creating new optimization baselines
- Took the initiative and advanced development of DeepOBS by fixing very impactful bugs
- Grade for Credit (german): **1.0** – best possible grade

IBM Aug 2019 – Oct 2019
Extreme Blue Internship supervised by Martin Oberhofer and Dr. Manfred Oevers [Python, REST, Gremlin]

- Researched possibilities for Master Data Management with Internet of Things use cases
- Developed more effective instance-level product master data representations through a RESTful API
- Developed a graph-based visualization based on React.js for a prototype in the healthcare sector
- Took the initiative to work closely with offering management in the USA to deploy the obtained improvements
- Presented the results at a conference for worldwide stakeholders and IBM-leaders in Cluj-Napoca, Romania

Cooperative State University Baden-Württemberg Stuttgart Oct 2017 – Jun 2018
Research Internship supervised by Prof. Dr.-Ing. Olaf Herden [Shell, LaTeX]

- Compared state-of-the-art NewSQL databases on the categories of the Business Readiness Rating
- Provided heuristics for the appropriate NewSQL database selection
- Grade for Credit (german): **1.5**, approximately equivalent to an "**A**" grade (UK)

Eisenmann SE Oct 2015 – Oct 2018
Research & Development Engineer + Bachelor Thesis [Java, JS, HTML, CSS, LaTeX]

- Research & Development projects in the field of Manufacturing Execution Systems
- Conceptualized and developed a highly cost-efficient single product tracking system
- Took the initiative to solve arising problems on-premise in the USA regarding the data collection
- Quantified and implemented more effective Key Performance Indicators for better performance insights
- Published several papers on these topics under a non-disclosure agreement

Education

University of Tübingen | *M.Sc.* – *Computer Science* strong first class honours equivalent (UK)
Focus on Machine Learning (Oct 2018 – Present)

DHBW Stuttgart | *B.Sc.* – *Computer Science* strong upper second class honours equivalent (UK)
Undergraduate education (Oct 2015 – Oct 2018)

Skills

Languages: German (native), English (business fluent), Latin (small latinum certificate), Japanese (beginner)

Programming: Python, Java, C#, Prolog, Matlab, R, SQL, Gremlin, HTML5, CSS3, JavaScript

Frameworks & Tools: Flask, React, TensorFlow, NumPy, Pandas, Version Control, Adobe Suite, Linux, Docker, Kubernetes, Microsoft Office, LaTeX

Databases: MySQL, Oracle, JanusGraph, MongoDB, VoltDB, NuoDB, CockroachDB

Selected Projects & Contributions

DeepOBS: Optimization Benchmarking Suite – Contributed Baselines, Scripts and improved Software Quality

App2Night: Location based mobile App to create, comment and rate user generated events to find the best event

SiteScrawler: Webapp to provide users with relevant news articles based on customisable topics of interest

Unpublished & Industry Research

[1] Robin M. Schmidt. *Calculation and Evaluation of Key Performance Indicators for Production within a Manufacturing Execution System*. (Title translated from German, subject to a NDA). 2017.

[2] Robin M. Schmidt. *Conception and Implementation of a Single Product Tracking System within a Press Hardening Production Line*. B.Sc. Thesis. (Title translated from German, subject to a NDA). 2018.

[3] Robin M. Schmidt. *Improvements for the configurable Data Analysis Pipeline within a Manufacturing Execution System*. (Title translated from German, subject to a NDA). 2018.

[4] Robin M. Schmidt. *New SQL Databases: An empirical evaluation of Open Source NewSQL Databases regarding modern Application Scenarios*. https://bit.ly/2OY6IGC. (Title translated from German). 2018.

ArXiv submissions

[5] Robin M. Schmidt. *Recurrent Neural Networks (RNNs): A gentle Introduction and Overview*. 2019. arXiv: 1912.05911 [cs.LG].

Publications

[6] Robin M. Schmidt, Frank Schneider, and Philipp Hennig. "Descending through a Crowded Valley — Benchmarking Deep Learning Optimizers". In: *Advances in Neural Information Processing Systems (NIPS)*. (under review). 2020.