

Magnus Mueller

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■ Professional Experience

- **AWS**
Vancouver, BC
Since 10/2022
Software Engineer in Neptune GraphDB and Distributed SQL
Selected Tasks: Design and implementation of improved sort and aggregation operators; evaluated and implemented frequency sketches for cardinality estimation; implemented new built-in query language functions; operations for performance of customer workload
- **Google**
Sunnyvale, CA
06/2019 – 09/2019
Software Engineering Intern in Data Infrastructure and Analysis
Tasks completed: Implemented two new join size estimation techniques in the F1 Query optimizer
- **SAP**
07/2015 – 01/2016
Working student in HANA DB Core Development
Tasks completed: Analyzed lock contention points; Benchmarking of components; Evaluation of prototypes
- **Uni Mannheim**
02/2014 – 01/2015
Teaching assistant at chair of Applied Computer Science I
Courses taught: “Algorithms and Data Structures”; “Applied Computer Science II” (OS, compilers, comp. Architecture)

■ Education

- **Ph.D.**
Computer Science
04/2016 - 09/2022
University of Mannheim, supervised by Prof. Guido Moerkotte
Focus in Cardinality Estimation and Query Optimization
Thesis: “Selected Problems in Cardinality Estimation”
Published full research papers at VLDB, ICDE, EDBT, and CIDR.
Selected courses taught: “Query Optimization”, “GPU Programming”
- **M.Sc.**
09/2013 – 01/2016
University of Mannheim, M.Sc. Business Informatics
Focus: Information Technology
Thesis: “Design, Implementation and Evaluation of a Parallel Physical Algebra for Main Memory Column-Stores”
- **B.Sc.**
10/2010 – 07/2013
University of Ulm, Focus: Finance, Information Technology
Thesis: “No-SQL Databases in Theory and Practice”

■ Relevant Computer Skills

- Programming: C++, C, Python, Java, Go
- Applications: GDB, Valgrind, Make, R, MATLAB, SQL, Git