

Thomas REBELE

Data Optimization and Performance

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Senior software engineer with expertise in query optimization.

Work experience

- 2024-04/2025-04 Senior software engineer at Keebo
- Initiated a new product project and incorporated legacy algorithms
 - Utilized Apache Calcite for query optimization
 - Debugged pods in a Kubernetes cluster and analyzed memory leaks
 - Performed on-call duties, analyzed Google Cloud logs to maintain system reliability
 - Worked with Java, Junit 5, Mockito, Jackson, Timefold, Jooq, Byte Buddy, Git, IntelliJ, Gradle, Github actions, Kubernetes / k8s, GRPC, Postman, Airflow, Eclipse MemoryAnalyzer, Snowflake, Postgres, DuckDB, BigQuery, Google Cloud Platform, and MacOS
- 2018-10/2024-03 Senior R&D engineer at TIBCO (formerly Orchestra Networks)
- Reworked the TIBCO EBX™ data validation to integrate a persistence layer for scalability
 - Optimized queries in Apache Calcite with custom operators and rules
 - Resolved performance bottlenecks, memory leaks, and handled support requests
 - Developed new tools and improved existing ones to accelerate development processes
 - Independently identified and executed opportunities for improvement
 - Worked with Java, Junit 4, SVN (via git-svn), Eclipse, Jira, Confluence, Visual Paradigm, VisualVM, JProfiler, Jenkins, Janino, JMH, Eclipse MemoryAnalyzer, and Refaster
- 2014-07/2015-01 R&D Internship at Stupeflix, Paris, in the video processing domain (6 months)
- Implemented an algorithm for space-time interpolation of two views of a scene
 - Worked with C++, FFmpeg, OpenCV, and CMake
- 2010-06/2011-04 Student trainee at Intergraph SG&I Deutschland GmbH (Utilities & Communication)
- Imported and transformed databases with SQL scripts
 - Worked with Oracle 10G / 11G, Visual Studio 2010, and VB.net

Education

- 2015-03/2018-08 PhD under the supervision of Fabian Suchanek at Télécom ParisTech (TPT): "Extending the YAGO knowledge base", with publications in ISWC (2016, 2017, 2018) and PAKDD 2018
- 2013-09/2015-03 Diplôme d'ingénieur at TPT, as part of a double degree
- 2012-10/2015-09 Computer science (M.Sc.) at Technical University Munich (TUM): Specialization in parallel programming with a focus on MPI; awarded the Deutschlandstipendium scholarship
- 2009-10/2012-09 Computer science (B.Sc.) at TUM (minor field of study: psychology)
- Bachelor thesis: Measuring performance of MPI on distributed systems
 - Computer Science department certificate: top 2% student
 - Student teaching assistant for various courses (597 hours)

Languages

- German, native
- English, C1 (excellent command)
- French, B2 (very good command)
- Japanese, A2 (basic command)

Software knowledge (excerpt)

- Computer languages : Java, Python, Bash, C, C++, CSS, HTML, Rust, Datalog, SQL, Javascript, Haskell, Matlab, Prolog, PHP, SPARQL, Standard ML, VB.net, VHDL, x86
- Eclipse, vim, git, LaTeX, D3.js, Ansible, OpenGL, MPI
- Administration of operating systems: Debian 3-12, Windows 2003, Windows 2012, pfSense 2.0
- Certificates: IBM Certified Database Associate / Administrator (2010)