DominikMoritz

PhD student in Computer Science & Engineering at the University of Washington

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Languages

German native
English proficient

Programming

Python, C++, Java,
JavaScript, Go,
Smalltalk,
CSS3 & HTML5

Systems, Frameworks & Techniques

Git, Linux, LaTeX,
PostgreSQL, D3,
Protobuf, Qt, TDD,
Testing, Prototyping

My goal is to use a combination of **large-scale systems for data analysis and sophisticated interactive visualizations** to support novel insights and fast exploration of multi-dimensional data. I hope to build visualization systems that use statistical analysis, both for driving visualization recommendation and guiding the user's exploration as well as to support richer exploratory analysis.

Education

since 2013	**PhD student** Computer Science & Engineering	University of Washington, Seattle

Advised by Bill Howe and Jeffrey Heer.
Research focus on distributed database systems and interactive data visualization.

2010–2013	**Bachelor of Science** IT-Systems Engineering	Hasso-Plattner-Institute, Potsdam, Germany

Bachelor's thesis: *Algorithms for the Visualization of Software System Evolution*.
GPA: 4.0 (1.0 in German system)
Advanced classes on database implementation, visualization algorithms, and logic.

Awards

2013-2014	**Fulbright Scholarship**	Bureau of Educational and Cultural Affairs, USA

Highly competitive, merit-based grant for international educational exchange for students, scholars, teachers and scientists.

since 2010	**Studienstiftung des Deustschen Volkes**	Studienstiftung, Bonn, Germany

The *German National Academic Foundation* grants prestigious scholarships to students of outstanding academic achievements.

Professional Experience

2014	**Google** – *Software Engineering Intern*	New York City, USA

Develop new algorithms for large scale production monitoring system to support more complex queries.   [Algorithm design, large scale software development, profiling, C++]

since 2013	**University of Washington** – *Research assistant*	Seattle, USA

Co-developing Myria, a distributed database for scientific Big Data. Project led by Magdalena Balazinska, Bill Howe, and Dan Suciu.

2012–2013	**Open Knowledge Foundation** – *Intern and Developer*	London, UK

Two-month summer internship and subsequent one-year involvement in development and training for CKAN, the most deployed open data portal in the world.
[Distributed teams, agile development, large legacy systems, Python]

2012–2013	**Hasso Plattner Institute** – *Bachelor's Project*	Potsdam, Germany

As part of the undergraduate program, in a team of four students. Developed a tool to visualize software evolution with 3D Voronoi Treemaps. I focused on theory and implementation of the layout algorithms.   [Legacy code, visualization, complex algorithms, C++]

2012	**University of Potsdam** – *Research Assistant*	Potsdam, Germany

In Knowledge Representation and Reasoning group from Professor Torsten Schaub. Working on theory and implementation of an extension of the Clasp Answer Set Programming solver for pseudo-boolean constraints.   [Research, benchmarking, logic programs, C++]

Publications

Demonstration of the Myria Big Data Management Service

Daniel Halperin, Victor Teixeira de Almeida, Lee Lee Choo, Shumo Chu, Paraschos Koutris, Dominik Moritz, Jennifer Ortiz, Vaspol Ruamviboonsuk, Jingjing Wang, Andrew Whitaker, Shengliang Xu, Magdalena Balazinska, Bill Howe, Dan Suciu

2014 ACM SIGMOD International Conference on Management of Data, 2014, Snowbird, Utah, USA

Visualization of Varying Hierarchies by Stable Layout of Voronoi Treemaps

Sebastian Hahn, Jonas Trümper, Dominik Moritz, Jürgen Döllner

5th International Conference on Information Visualization Theory and Applications (IVAPP 2014), 2014