Dominik Moritz



My goal is to use a combination of large-scale systems for data analysis and 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 for supporting richer exploratory analysis.

Education

since 2013 University of Washington – Ph.D. in Computer Science & Engineering

Seattle

Advised by Bill Howe and Jeffrey Heer.

Member of the Database Group and the Interactive Data Lab. Research focus on distributed database

systems and interactive data visualization.

M.Sc. in Computer Science & Engineering expected in June 2015

2010-2013 **Hasso Plattner Institute** – *B.Sc. in IT-Systems Engineering*

Potsdam

Bachelor's thesis: Algorithms for the Visualization of Software System Evolution.

GPA: 4.0 (1.0 in German system), highest distinction, rank 1/74

Advanced classes on database implementation, computational geometry, architecture, and logic.

Peer-reviewed Publications

Perfopticon: Visual Query Analysis for Distributed Databases

Dominik Moritz, Daniel Halperin, Bill Howe, Jeffrey Heer. Computer Graphics Forum (EuroVis), Cagliari, Italy, 2015

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. *Proceedings of the 2014 ACM SIGMOD international conference on Management of data. 2014*

Visualization of Varying Hierarchies by Stable Layout of Voronoi Treemaps

Sebastian Hahn, Jonas Trümper, **Dominik Moritz**, Jürgen Döllner. Proceedings of the 5th International Conference on Information Visualization Theory and Applications (IVAPP). 2014

Notable Awards

2013-2014 Fulbright Fellowship

Bureau of Educational and Cultural Affairs, USA

Highly competitive, merit-based grant for international educational exchange for students, scholars,

teachers and scientists.

2010-2015 Studienstiftung des Deustschen Volkes

Studienstiftung, Bonn

The German National Academic Foundation grants prestigious scholarships to students with

outstanding academic achievements. Merit-based grant for B.Sc. and M.Sc.

2010-2015 Hasso Plattner scholarship

Hasso Plattner Institute, Potsdam

One-year scholarship awarded to the best graduates of each year.

Professional and Research Experience

Summer 2015 Google Research – Research Intern

Mountain View

Intern in the Structured Data Team with Sudip Roy, Alon Halevy, Chris Olston, Alkis Polyzotis and Natasha Noy.

Summer 2014 **Google – Software Engineering Intern**

New York City

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

2012-2013 Open Knowledge Foundation – Intern and Developer

London and Berlin

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, JavaScript]

2012-2013 Hasso Plattner Institute – Bachelor's Project

Potsdam

In a team of four students developed a tool to visualize software evolution with 3D Voronoi Treemaps. I focused on the theory and implementation of layout algorithms.

[Legacy code, visualization, complex algorithms, C++]

2012-2013 University of Potsdam – Research Assistant

Potsdam

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

2012 Google Summer of Code

Internet

Extend Open Data platform for information about people. [Open source development, JavaScript]

Major Projects More on GitHub @domoritz

since 2014 Vega, Vegalite, Polestar, Voyager – vega.github.io

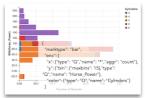
UW Interactive Data Lab

Vega and Vegalite are declarative visualization grammars. Polestar and Voyager are tools for visual data exploration.









since 2013 Myria – myria.cs.washington.edu

UW Database group and the UW eScience Institute

Myria is a distributed, shared-nothing Big Data management system. I developed new operators, the expression language, Profiling, and query language features.





2012-2014 **CKAN** – ckan.org

Open Knowledge Foundation

CKAN (Comprehensive Knowledge Archive Network) is the most popular open data publishing platform used by data.gov and many other governments, organizations and universities. I developed the CKAN data store, preview API, and importer services.

Teaching Experience

Spring 2015 Teaching Assistant, CSE 512 Data Visualization

University of Washington

Prepared discussions, graded assignments, held office hours, visualization tools and D3 tutorial.

Winter 2014 SQL Workshop

UW eScience Institute

One day workshop on SQL for scientists at the University of Washington.

Spring 2012 **Teaching Assistant, VHDL**

Hasso Plattner Institute

Prepared course material for class on VHSIC Hardware Description Language.

Languages

Programming

Systems, Frameworks & Techniques

German native English fluent

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

Git, Linux, Latex, PostgreSQL, D3, Vega, Angular, Protocol Buffers, Qt, TDD, Testing, Prototyping