

David Kräutmann

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Education

M.Sc. Computer Science, *RWTH Aachen University*. **2017–2019**
B.Sc. Computer Science, *RWTH Aachen University*, **2014–2017**
Thesis: Refining heap-shape information in Java using reachable types [4].

Work experience

IT operations, *Dan & L GmbH*, Mönchengladbach. **2008–**
Planning and maintaining a virtualized Windows/Linux small-business IT infrastructure

Software development, *SimulaHS*. **2017**
Port of a C++ window compositor into Haskell.
Key areas: writing C bindings and Haskell-OpenGL code, translating C++ architecture into Haskell architecture

Research assistant (Verification), *RWTH Aachen*. **2016**

Developer/DevOps, *StriveWire GmbH*, Hamburg. **2015–2016**
Node.js developer role, took on DevOps duties after migrating our entire infrastructure to AWS for scalability reasons and implementing various much-needed monitoring tools.

Teaching assistant (linear algebra), *RWTH Aachen*. **2015**

Languages

German: native
English: fluent
Russian: proficient

Skills

Preferred: Haskell
Known: AWS, Postgres, various imperative languages, Scala, mathematical optimization, ...
Basic: Ansible, Coq, HTML, Shell, ...

Interests

CS-related: Functional programming, mathematical optimization, high-performance computing, type and category theory

Open source contributions

- GHC [2] – multiple; see [1]

Coursework

- Fastest implementation of a conjugate gradient algorithm in a competition between Bachelor students [3]
- Seminar paper about integration of Satisfiability-modulo-theories (SMT) solvers into Coq

Extracurricular work

- Teaching Haskell via a workshop-esque format at RWTH Aachen (organized mostly by myself)

Links

- 1 GHC commits. <https://github.com/ghc/ghc/commits/master?author=KaneTW>.
- 2 Glasgow Haskell Compiler (GHC). <http://haskell.org/ghc>.
- 3 HPC competition (German only). <http://www.hpc.rwth-aachen.de/teaching/lab/ss15index.php>.
- 4 David Kraeutmann. Refining heap-shape information in Java programs using reachable types. Bachelor thesis, RWTH Aachen University, 3 2017. https://kane.cx/downloads/dkr_thesis_final.pdf.