

Carsten Karbach

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🌐 CarstenKarbach

Personal data

date of birth 13th March, 1989
birthplace Heinsberg
nationality German

Qualification summary

Software Engineer with detailed knowledge of object oriented design, applied software architecture and design patterns. Lead of web application development team and contributing to international projects in the domain of tools for monitoring supercomputers. Development of distributed and platform-independent applications in multiple programming languages, which allow for hands-on experience with agile development, test automation, continuous integration and revision control. Master's degree in Technomathematics with overall grade *very good* consecutive to the bachelor's degree in Scientific Programming coupled with a parallel apprenticeship.

Professional Experience

since 09/2012 **Software engineer**, *Forschungszentrum Jülich – Jülich Supercomputing Centre.*

web development Lead of web development team. Design of a PHP web application for submission of scientific projects requesting compute time on supercomputers.

PTP Contributor for the Eclipse Parallel Tools Platform (PTP). JUnit tests and design of XSD for data exchange. Presentations and tutorials on monitoring architecture and usage of PTP.

LLview Refactoring and extensions of cluster monitoring framework written in Perl. Adaption and installation for in-house systems and external supercomputing centers. Setup of a continuous integration server.

holography Evaluation of computer-generated holography as scientific visualization technique. Development of MPI- and OpenMP-parallelized applications generating holograms for performance and numerical analysis.

training supervisor Mentor for undergraduate student. Teaching of basic software engineering skills.

09/2010–08/2012 **Software engineer (part time)**, *Forschungszentrum Jülich – Jülich Supercomputing Centre.*

GUI development for PTP with Java. Implementation of LLview functionality as plug-in for Eclipse. Parsing XML-data of a monitored cluster and visualization with SWT.

Study

09/2010–08/2012 **Master of Science in Technomathematics**, *Aachen University of Applied Sciences*, Campus Jülich, Overall grade: *very good*.

Constitutive master course of Scientific Programming

courses Distributed systems, scientific visualization, software engineering, parallel algorithms, parallel system architectures, image processing, stochastics, operations research, computer mathematics

Master's thesis

topic A highly configurable simulator for job schedulers on supercomputers

09/2007–08/2010 Bachelor of Science in Scientific Programming, *Aachen University of Applied Sciences*, Campus Jülich, Overall grade: *very good*.
Combination of mathematics and informatics

Bachelor's thesis

topic Design of a web interface for the supercomputer monitoring tool LLview

Professional Education

09/2007–08/2010 Mathematical and Technical Software Developer, *Forschungszentrum Jülich – Jülich Supercomputing Centre*, Overall grade: *excellent*, graduated as best trainee of this profession in Germany.
Parallel professional education and study in Scientific Programming

Software Skills

general Unix, XML, XSD, XSLT, Android, JUnit, Hudson, Swing, SWT, DBMS, SQL, OpenGL, web services, MPI, OpenMP
tools Subversion, git, gerrit, Ant, CMake, Eclipse, \LaTeX , Xcode
programming Java, PHP, C++, C, Perl, Objective-C
languages

Language Skills

German **native**
English **fluent**

Interests

mobile applications Development of mobile applications for Android. Release of an open source board game called MoTAC on Google Play in 2014.
soccer Participation in company-internal soccer league

Jülich, 25th January 2015