Carsten Karbach

Luxemburger Str. 265
50939 Köln
✉ *+49 176 69631992*
📞 *carstenkarbach@gmx.de*
🌐 *carstenkarbach.github.io*

Qualification summary

Senior backend developer and technical lead for the implementation of REST APIs and full-stack web applications in Python, PHP, Kotlin and JavaScript. In-depth knowledge of the Python frameworks FastAPI, Flask, SQLAlchemy as ORM middleware and PHP/Laravel. Deployment and monitoring of scalable backend systems with flexible system configuration via Docker using MariaDB, Redis, Traefik and Nginx. In-depth experience in design, architecture, development, testing, maintenance and operation of backend software in varied projects at an app agency. Daily use of agile methods, code reviews, automated tests, continuous integration and version management with git. Master's degree in applied computer science and mathematics (Technomathematics).

Work experience

since 07/2020   **Backend- und Android-Developer**, *mobivention GmbH Cologne*.

Backend Development   Project based requirements analysis, resource estimation, software architecture, implementation, testing and deployment of backend systems for apps and web frontends. Agile development in small teams of app, web and backend developers. Code reviews, pair programming and unit tests on a daily basis. Amongst others, implementation of individualized content management systems distributing content for the mobile apps, highly scalable sports betting games, datbases with flexible and efficient full text search, MDM implementation for monitoring mobile terminals in point of sale environments, customized app marketplaces for app distribution. Usage of load balancers, relational databases, OpenAPI specification, asynchronous code based on Python coroutines as well as template engines like Jinja2. Experience with frontend development with JavaScript and Vue framework.

Android Development   App development with Kotlin, e.g. for news or game apps. Coroutines, declarative UI with Jetpack Compose, Android architecture components and linking with backend APIs.

Security officer,   Certified security officer and auditor for information security management sys-
internal auditor   tems (ISMS) according to ISO 27001. Design, planning, operation and auditing mobivention's ISMS.

09/2012–06/2020   **Software Developer**, *Forschungszentrum Jülich – Jülich Supercomputing Centre*.

Web Development   Technical lead in the development of full-stack PHP web applications for applying and review of scientific computing time applications. Requirements analysis, architecture design, project planning, implementation, code reviews, installation and documentation.

09/2010–08/2012	**Software engineer (part time)**, *Forschungszentrum Jülich – Jülich Supercomputing Centre*. GUI development for Eclipse IDE with Java.

Study

09/2010–08/2012	**Master of Science in Technomathematics**, *Aachen University of Applied Sciences*, Campus Jülich, Overall grade: *very good*. combination of applied mathematics and computer science
courses	Distributed systems, scientific visualization, software engineering, parallel algorithms, parallel system architectures, image processing, stochastics, operations research, computer mathematics
Master's thesis	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*.

Professional Education

09/2007–08/2010	**Mathematical and Technical Software Developer**, *Forschungszentrum Jülich – Jülich Supercomputing Centre*, Overall grade: *excellent*. Parallel professional education and study in Scientific Programming

Software Skills

general	Unix, REST-APIs, DBMS, MariaDB, SQL, Nginx, Redis, Traefik, S3, HTML, CSS, jQuery, Poetry, Composer, Jenkins, Docker, Android, AWS
tools	git, IntelliJ IDEA Suite, Android Studio, Jenkins, Postman, Ruff, ssh, LaTeX, Terraform
progamming languages	Python, Kotlin, PHP, JavaScript, Java

Language Skills

German	**native**
English	**very good knowledge**

Interests

coffee	Love making coffee with my Rancilio Silvia machine, training and mostly failing on latte art, know where to find Cologne's best tasting coffee
sports	soccer, Urban Sports, dancing

Cologne, September 6, 2024