# Martin **Löper**

CLOUD SOLUTIONS ARCHITECT
*D-75177 Pforzheim, Germany*

✉ martin.loeper@gmx.de    |    🏠 www.mloeper.me    |    🖊 martin-löper    |    in martinloeper

*"Somewhere between Dev and Ops"*

## Education

**Stanford University (SCPD)**                                                                                      *Online*

CYBERSECURITY GRADUATE CERTIFICATE: CS 251, CS 212, CS 155, CS 255 (3.96 GPA)                      *Sept. 2021 - Mar. 2023*

**Karlsruhe Institute of Technology (KIT)**                                                *Karlsruhe, Germany*

B.SC. IN INFORMATION ENGINEERING AND MANAGEMENT (3.2 GPA; TOP 10% AS PER ECTS GRADING TABLE)     *Okt. 2014 - Sept. 2020*

**Stromberg-Gymnasium**                                                            *Vaihingen an der Enz, Germany*

ABITUR / GENERAL HIGHER EDUCATION ENTRANCE QUALIFICATION (3.9 GPA; TOP 3% STATEWIDE)              *Sept. 2006 - Jun. 2014*

- Organized the Arduino microcontroller and the homepage group for students.

## Skills

| | |
|---|---|
| **Industry Knowledge** | Web Development, AWS Cloud Architecting, Linux System Administration, Linux & IoT Systems Programming |
| **Development** | Node.js, Nest.js, REST, GraphQL, Debian Packaging, Git, AWS SDK, MySQL |
| **Operations** | DataDog, Sentry, Amazon CloudWatch, Amazon Athena, MongoDB Atlas, AWS CLI |
| **DevOps** | Docker, Packer, Ansible, GitLab CI, GitHub Actions, AWS CDK, AWS CloudFormation |
| **Programming** | Typescript, Python, Java, Bash, C++ |
| **Languages** | German (native), Polish (native), English (C1) |

## Experience

**Nesto Software GmbH**                                                                     *Karlsruhe, Germany*

CLOUD SOLUTIONS ARCHITECT                                                                    *Sept. 2017 - PRESENT*

- Built Nesto's cloud infrastructure from the ground up with a strong preference for state-of-the-art AWS architectures and services.
- Coordinated IoT development, IoT fleet operations, and systems programming - including on-premise installations for clients across Germany.
- Operated internal services as well as mission-critical databases and SaaS workloads in the cloud.
- Participated in full-stack application development using Node.js, TypeScript, OpenUI5, and Vue.js.
- Initially focused on CI/CD automation and classic DevOps tasks.

**FZI Research Center for Information Technology**                                          *Karlsruhe, Germany*

SOFTWARE DEVELOPER [WORKING STUDENT]                                                         *Apr. 2016 - Jan. 2018*

**SAP**                                                                                      *Walldorf, Germany*

SOFTWARE INTEGRATION ENGINEER [INTERNSHIP]                                                   *Apr. 2016 - Sept. 2016*

- Developed extensions for the MediaWiki knowledge management platform SAPedia.
- Built and operated applications based on the LAMP stack and Apache Solr.
- Set up a continuous delivery pipeline using GitHub for Enterprise and Travis CI.
- Used SAP Monsoon as an IaaS provider to scale the service flexibly and the Chef IaC platform to automate infrastructure deployments.
- Connected on-premise services with the SAP HANA Cloud Platform using the SAP HANA Cloud Connector.
- Optimized the Solr search index using Lucene syntax and implemented a custom Solr extension in Java.
- Implemented applications based on the OpenSocial Gadget Standard and integrated them into the internal SAP ecosystem following SAP Security Procedures using SAML, SSL, PKI, and principal propagation techniques.

**Karlsruhe Institute of Technology**                                                       *Karlsruhe, Germany*

ACADEMIC TUTOR IN COMPUTER SCIENCE                                                           *Oct. 2015 - Sept. 2017*

- Wrote sample solutions for the programming lecture students at the Institute for Program Structures and Data Organization.
- Extended an automatic testing framework for student programming assignment submissions.
- Moderated the lecture's online question-and-answer platform, ILIAS.
- Created metamodels for languages conforming to the international standard IEC 61131-3.
- Designed and implemented a domain-specific language for change propagation analysis using the open-source framework Xtext.

# Honors & Awards

2017    **EXIST**, Business Start-up Grant from the German Federal Ministry for Economic Affairs and Energy    *Karlsruhe, Germany*

# Presentations

### MongoDB.live DACH [GERMAN]    *Online Event*
SPEAKER FOR TECHNICAL SESSION <KOSTENEFFIZIENTE DSGVO PROTOKOLLIERUNG AT SCALE MIT ATLAS ONLINE ARCHIVE>    *Dec. 2020*
- Presented Nesto's Cloud Architecture, Tech Stack, and Database Cluster.
- Showed how Nesto saved data storage and backup costs using MongoDB Online Archive.
- Outlined our approach for SaaS applications to scale cost-effectively while adhering to strict EU GDPR requirements.
- The story was published by MongoDB as an article on their website: *Automating hospitality management in uncertain times*.

# Certifications

### AWS Certified Solutions Architect – Professional    *7C7KWL51FNVQQ9SQ*
AMAZON WEB SERVICES TRAINING AND CERTIFICATION    *Jul. 2020 - Jul. 2023*

### AWS Certified DevOps Engineer – Professional    *512NJSPCB2F11K5J*
AMAZON WEB SERVICES TRAINING AND CERTIFICATION    *Jun. 2019 - Jun. 2022*

### AWS Certified Security – Specialty    *T933917CB1F1QLCL*
AMAZON WEB SERVICES TRAINING AND CERTIFICATION    *May. 2019 - May. 2022*

### AWS Certified Advanced Networking – Specialty    *YJR50BF232QE1QW8*
AMAZON WEB SERVICES TRAINING AND CERTIFICATION    *Nov. 2019 - Nov. 2022*

### AWS Certified Data Analytics – Specialty    *PCJ3DYYKMJFE1J51*
AMAZON WEB SERVICES TRAINING AND CERTIFICATION    *Dec. 2019 - PRESENT*

### Certified Data Protection Officer and Trained & qualified specialist BDSG & GDPR    *022012#20023830*
COMPLAVIS AKADEMIE    *Mar. 2019 - PRESENT*

# Publications

### A cross-disciplinary language for change propagation rules [IEEE CONFERENCE PROCEEDINGS PAPER]
K. BUSCH, D. WERLE, M. LÖPER, R. HEINRICH, R. REUSSNER, B. VOGEL-HEUSER
*2018 IEEE 14th International Conference on Automation Science and Engineering (CASE)*, 2018

### Eine Sprache für die Spezifikation disziplinübergreifender Änderungsausbreitungsregeln [GERMAN BACHELOR'S THESIS]
M. LÖPER
Karlsruhe Institute of Technology, 2018

Translated by Busch in "An Architecture-based Approach for Change Impact Analysis of Software-intensive Systems", Ch. 9 [DOCTORAL DISSERTATION]

# Extracurricular Activity

### Post Südstadt Karlsruhe (PSK)    *Karlsruhe, Germany*
AMATEUR SOCCER PLAYER    *Okt. 2014 - PRESENT*
- Played as goalkeeper in the Tier VII-Landesliga Mittelbaden (Baden's Football State League) between 2014 and 2016.
- Played various positions in the Uni-Liga Karlsruhe - the student soccer competition between all higher education institutions in Karlsruhe.