

# GUNTHER BIDLINGMAIER

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https://github.com/gbid

## WORK EXPERIENCE

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**Software Engineer in CTO Taskforce, Check24** *September 2023 - January 2024*

- ▷ Built a new server infrastructure for the core product of Check24 (Car Insurances).
- ▷ Deployment of a new application on this infrastructure including CI/CD and dynamic creation of logical preview environments for feature branches.
- ▷ Implementation of High Availability for core parts of the infrastructure, including the central MySQL database.
- ▷ Linux | Ansible | CI/CD | Kubernetes

**Researcher at the Chair of Algorithms and Complexity, TU Munich** *2021 - 2023*

- ▷ Designed, implemented and analyzed a greedy algorithm for a fundamental scheduling problem, simplifying understanding and implementation compared to previous solutions. Reduced the running time from  $\mathcal{O}(n^3d^3)$  to  $\mathcal{O}(nd)$ .
- ▷ Taught a Bachelor's course on Probability Theory and a Master's course on algorithms and data structures.
- ▷ Rust | Discrete Optimization | LaTeX | Teaching

**Working student at BMW AG** *April 2018 - March 2019*

- ▷ Worked on a Web platform providing a unified API to data endpoints within BMW IT systems
- ▷ Implemented user verification by interfacing with the BMW LDAP system
- ▷ Programmed multiple Web applications within this platform (600 internal users)
- ▷ Ticket based, agile work in an international, distributed developer team
- ▷ TypeScript | Node.js | React.js | GraphQL | Python | MongoDB

## EDUCATION

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**M.Sc. Computer Science at Technical University of Munich** *2017 - 2020*

- ▷ Final grade: 1.1
- ▷ Relevant coursework: Advanced Algorithms and Data Structures, Formal Methods, Algorithmic Game Theory

**Erasmus stay at Chalmers University of Technology, Gothenburg, Sweden** *winter term 2017/18*

- ▷ Relevant coursework: Programming Languages, Dependent Types (Agda)

**B.Sc. Information Systems at Technical University of Munich** *2014-2017*

- ▷ Final grade: 1.4 (top 5% of students)

**Abitur at Ellentalgymnasien, Bietigheim-Bissingen** *2014*

- ▷ Final grade: 1.8

## SELECTED PROJECTS

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### Codecrafters

- ▷ Implementation of a Bittorrent Client, Redis Server from scratch
- ▷ Rust | Async Programming | TCP Sockets

### Generic Tactic Tracing in Isabelle

- ▷ Extended the Proof Assistant Isabelle to trace and hierarchically display all invocations of rewrite rules in the simplification engine's core
- ▷ Codebase of more than 200,000 lines of Standard ML code
- ▷ Standard ML | Scala | Formal Methods

## LANGUAGES

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German: native | English: fluent | Latin: Großes Latinum

## SELECTED ACTIVITIES AND AWARDS

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- ▷ Scholarship program TUM: Junge Akademie *2016 - 2017*
- ▷ Symphony orchestra Junge Münchner Symphoniker *2014 - 2023*