




## EDUCATION

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- **PhD Student in Computer Science** Aachen, Germany  
RWTH Aachen University *Oct 2022 – Expected 2026*
- **Master of Science in Computer Science** Aachen, Germany  
RWTH Aachen University; Grade: 1.2 *Oct 2020 – Oct 2022*
- **Bachelor of Science in Computer Science** Aachen, Germany  
RWTH Aachen University; Grade: 1.4 *Oct 2017 – Oct 2020*
- **Abitur (High School Graduation)** Soest, Germany  
Aldegrevener Gymnasium; Grade: 1.7 *Oct 2009 – Oct 2017*

## EXPERIENCE

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- **RWTH Aachen University**  Aachen, Germany  
Student Assistant *Oct 2018 – Sep 2022*
  - **Assisted in Teaching and Research:** Research focussing on automated methods to analyze integer term rewrite systems, a formalism to express programs containing ordinary integer and arbitrary data structures, e.g., see here.
- **RWTH Aachen University**  Aachen, Germany  
PhD Student: Research and Teaching Assistant *Oct 2022 – Present*
  - **Research – Probabilistic Program Verification:** My PhD focused on developing automated methods to analyze termination and expected runtime of probabilistic programs dealing with arbitrary data structures via probabilistic term rewrite systems. Full publication list on my website.
  - **Teaching – Programming Languages and Verification:** Nominated for the student-voted teaching award for outstanding teaching assistants. Responsibilities included designing exercises, leading sessions, and assisting lectures. Full course list on my website.
- **App-Stone GmbH**  Soest, Germany  
Founder & Shareholder *Mai 2018 – Present*
  - **Foundation:** Co-founded Capybara Software UG in 2018 and App-Stone GmbH after two years of growth. Both companies specialize in on-demand iOS and Android app development.
  - **Management:** Managed a team of up to 10 employees across various departments. Handled business decisions, hiring, project management, planning, and drafting project proposals with price calculations.

Software Engineer *Mai 2018 – Present*

  - **Android Development:** Mobile apps in Android Studio (Java)
  - **iOS Development:** Mobile apps in Xcode (Swift)
  - **Hybrid Mobile Development:** Multi-platform apps with Flutter (Dart)
  - **Server Development:** Backends with Django. Dockerized with Postgres, Unicorn, Nginx. Deployed on AWS
  - **Testing & Debugging:** JUnit testing, error analysis with Firebase Crashlytics

## PROJECTS

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- **AProVE:** AProVE (Automated Program Verification Environment Web Interface) is a tool for automatically proving termination, runtime complexity, safety, etc. of several programming languages like Java, C, or Haskell.
- **BWL Champion:** BWL Champion is an app that allows users to test and expand their business knowledge digitally at any time via Quizzes and can even be played competitively.
- **AABC:** African Alphabets of the Bayreuth Cluster (AABC) provides mobiles and desktop PCs (Windows and iOS) with keyboards for all common African languages and scripts.
- **Amsel - Build up your voice:** Amsel is a mobile application for singers of every performance level. It provides many warm-up techniques and exercises to develop a more professional singing voice.

## SKILLS AND HOBBIES

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**Prog. Languages:** Java, Python, Dart

**Technologies:** AWS, Docker, Git

**Hobbies:** Competitive (E-)Sports, e.g., playing Handball, playing E-Bass and learning Violin