Marvin Borner (21)

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Education

- **Eberhard Karls Universität** — Tübingen
  B.Sc. in Computer Science `Python` `ASM` — *2024 – 2025*
  B.Sc. in Cognitive Science (incomplete) `Racket` `Java` `C++` `R` `MATLAB` `Idris` `Python` `LaTeX` — *2021 – 2024*
- **Robert Bosch Schule** — Ulm
  Technical Gymnasium with specialization in Computer Science (Abitur) `C#` `ASM` `SQL` — *2018 – 2021*

Work Experience

- **Department of Computer Science – Software Engineering** — Tübingen
  Student Compiler Engineer `Scala` `Scala JS` `Effekt` — *12.2023 – Present*
- **ML Cloud** — Tübingen
  Student Software Developer `Python` `JS` `SQL` `Docker` — *03.2023 – 11.2023*
  - **Full-stack development**: Django-based interface for user, group, and HPC resource management.
  - **Tool integration**: Integrated SLURM, LDAP, Grafana, and Request Tracker.
  - **Energy optimization**: Conducted analyses to reduce HPC energy consumption.
  - **Collaboration**: Joint project of *Tübingen AI Center*, *Max Planck Institute for Intelligent Systems*, *Institut für Theoretische Physik Tübingen*, and *AG Bethge*.
- **Department of Computer Science – Database Systems** — Tübingen
  Teaching Assistant `Racket` — *10.2022 – 02.2023*
  - **Tutoring**: Taught *Praktische Informatik 1: Deklarative Programmierung* to first-year students.
  - **Grading**: Graded exercise sheets and exams.
- **Eaglefit GmbH** — Langenau
  Software Consultant — *09.2021 – 09.2022*
  Web Developer `PHP` `JS` — *12.2017 – 02.2018*

Other Experience

- **Jugend Hackt** — Berlin, Hamburg, Ulm
  Participant in hackathons `VueJS` `SQL` `PHP` `Kotlin` — *2017 – 2021*
  - **JugendHacktApp**: Progressive web application for event management, account-based registration and communication within the Jugend Hackt community.
  - **BlindEye**: Android application giving navigation advice to people with visual impairment.
  - **Personal Security Agency**: Web application for analyzing the personal online presence with the aim of illustrating data monopolies.
- **Austrian Data Hero Competition** — Wien
  Submission in the category "Talents" `SPARQL` `JS` — *2020*
  - **Subsidiary Browser**: Interactive graph of monopolistic companies and their subsidiaries.
- **Federal Competition of Artificial Intelligence (BWKI)** — Tübingen
  Participant as part of a team `Python` — *2019*
  - **Deception Detection**: Detection of lies and deception with the help of machine learning by analyzing text, video and audio data.
- **Various programming competitions** — Online, Karlsruhe, Hamburg
  Advent of Code, Project Euler, Kattis, GPN21 kitctf, Potluck CTF `Python` `C` — *2018 – Present*

Software Projects

- **Melvix**: Operating system with preemptive multitasking for x86 32-bit computers written from scratch. Includes self-written drivers for keyboard and mouse, network, framebuffer graphics, paging, and hard disk. `C` `NASM`
- **SegelBoot**: Bootloader for x86 32-bit computers written from scratch. `C` `NASM`
- **Bruijn**: Programming language based on pure lambda calculus. Uses self-written multi-threaded reduction strategies based on abstract machines derived from current research. `Haskell`
- **Birb**: Esoteric programming language that only consists of bird emojis (combinatory logic) `Haskell`