

# Max Bothe

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ℝ<sup>6</sup> Max Bothe



## Skills

Specializations Software Engineering, Data Analysis, Mobile Development, UI/UX Design

Qualifications Project Management, Scrum (PSM I), Design Thinking

### Programming

Advanced Python, SQL, Swift, iOS Development

Intermediate Ruby, Backend Development

Basic Frontend Development

### Other

Interests Adobe Illustrator, Adobe Photoshop

Languages German (native), English (fluent)

## Experience

Since Apr 2025 **Research Associate**, *Robert Koch Institute*, Berlin, Germany

Implementing a centralized system for the provision of secondary reference data

Jul 2017 - Mar 2025 **Research Associate/Software Engineer**, *Hasso Plattner Institute*, Potsdam, Germany

- Main responsible for the concept and development of the mobile applications for the HPI learning platform openHPI used by hundreds of thousands of mobile learners (Swift, Kotlin)
- Contributed to the design and development of *openHPI*, focusing on public APIs, accessibility and improvements to the user experience, impacting millions of users and key partners such as SAP and WHO (Ruby on Rails, HTML5, JS, JSON:API)
- Led the working group for user experience: conducting regular meetings as well as planning and implementing improvements (Figma)
- Collaborated with project partners and mentored new colleagues and student assistants

Oct 2015 - Jun 2017 **Teaching Assistant**, *Hasso Plattner Institute*, Potsdam, Germany

Mentored student teams in project management and taught design thinking methodologies for the course Global Team-based Product Innovation

Mar 2014 - Jun 2017 **Student Assistant**, *Hasso Plattner Institute*, Potsdam, Germany

Developed and designed an interactive tactic board for soccer analytics using geospatial data (HTML5, JS, Django, SQL, SAP HANA)

Apr 2013 - Sep 2013 **Software Developer Intern**, *SAP Research*, Belfast, United Kingdom

Developed a business process simulation that relies on BPMN models (Spring, SQL)

Aug 2012 - Feb 2013 **Mobile Developer Intern**, *Getemed AG*, Teltow, Germany

Developed an iOS application to configure longterm ECG recorders (Objective-C, MFi technology by Apple)

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## Education

- Since Jul 2017 **Ph.D. Student**, *Hasso Plattner Institute*, Potsdam, Germany
- Researched the characteristic behavior and requirements of mobile learners in MOOCs
  - Designed and implemented new features to support mobile learners in network-independent and short, interspersed learning activities
  - Conducted several studies with thousand learners: formulating hypotheses and creating appropriate study designs (e.g., observational studies, randomized controlled trials, surveys)
  - Analyzed large data sets with statistical methods to better understand learners' behavior and their learning achievements (custom reporting tools of the platform, Python, SQL, Elasticsearch, ETL, pandas, seaborn, scipy, scikit-learn)
- Oct 2013 – Jun 2017 **Master of Science**, *Hasso Plattner Institute*, Potsdam, Germany  
Majoried in IT-Systems Engineering (Grade: 1.1)  
*Master's thesis*: From MOOCs to Micro Learning: Optimizing mobile video-based learning
- Oct 2014 – Jul 2015 **Joint Project on Global Team-based Product Innovation & Engineering**, *Stanford University*, California, USA  
Participated successfully in the ME310 course series collaborating as a joint team-of-teams
- Oct 2009 – Jul 2012 **Bachelor of Science**, *Hasso Plattner Institute*, Potsdam, Germany  
Majoried in IT-Systems Engineering (Grade: 1.8)  
*Bachelor's thesis*: Implementation of an iOS application for configuration of longterm ECG recorders via Bluetooth

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## Selected Projects

- Jun 2017 - Aug 2024 **Mobile Applications for the HPI Learning Platform**  
Developed native mobile applications for iOS and Android for the HPI learning platform *openHPI*, which provide a streamlined design, optimized interactions and complementary features tailored to mobile use cases
- Mar 2014 - Jun 2017 **Interactive Tactic Board for Soccer Analytics**  
Developed an interactive tactics board based on geospatial data as a valuable tool for game analysis and training preparation, allowing coaches and professional athletes to analyze the specific way a game is set up and how team members perform in a game
- Oct 2014 – Jul 2015 **Audi Ownership Experience in 2025**  
Worked on a design challenge in cooperation with Stanford University, developing a prototype of the must have features of the Audi ownership experience in 2025 using design thinking methodologies
- Mar 2012 – Feb 2013 **SEER 1000 iOS Application**, *Bachelor project & Internship*  
Developed of an iOS application to configure longterm ECG recorders via Bluetooth

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## Selected Publications

- Sep 2022 **Stay at Home and Learn: Did the COVID-19 Pandemic Influence Mobile Learning in MOOCs?**, M. Bothe, Ch. Meinel. *Proceedings of the 2022 IEEE Learning With MOOCS (LWMOOCS)*
- Nov 2021 **Video Consumption with Mobile Applications in a Global Enterprise MOOC Context**, M. Bothe, F. Schwerer, Ch. Meinel. *Innovations in Learning and Technology for the Workplace and Higher Education (TLIC 2021)*
- Jun 2021 **The Impact of Mobile Learning on Students' Self-Test Behavior in MOOCs**, M. Bothe, Ch. Meinel. *Eighth ACM Conference on Learning @ Scale 2021 (L@S '21)*
- Sep 2020 **On the Potential of Automated Downloads for MOOC Content on Mobile Devices**, M. Bothe, Ch. Meinel. *Proceedings of the 2020 IEEE Learning With MOOCS (LWMOOCS)*
- Apr 2019 **From MOOCs to Micro Learning Activities**, M. Bothe, J. Renz, T. Rohloff, Ch. Meinel. *Proceedings of the 2019 IEEE Global Engineering Education Conference (EDUCON)*