

CHRISTOPHER HARTH-KITZEROW

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EXPERIENCE

Software Engineer (Full Time) - Autonomous Driving

since Sep 2024

BMW Group, *Munich*

- Designed and implemented algorithms for camera-based lane marking association using *C++*.
- Integrated computer vision models into the vehicle's control unit using *C++*.

Researcher and Developer (Full Time) - Cryptography & Machine Learning

Dec 2020 - May 2024

BMW Group, *Munich*

- Designed novel Secure Multiparty Computation (MPC) and Privacy Preserving Machine Learning (PPML) protocols that outperform state-of-the-art ones by up to eight times. Implemented [open-source frameworks](#) in *C++* that outperform existing ones by up to three orders of magnitude.
- Worked with several departments to implement use case prototypes using *Federated Learning*, *PPML*, and *MPC*.

Researcher and Developer (Working Student) - 5G Monitoring

Jun 2020 - Nov 2020

Huawei Technologies, *Munich*

- Developed scripts and mobile applications to monitor and evaluate the 5G connection of user devices using *Python* and *Android Studio*.

Researcher and Developer (Intern) - Blockchain

Mar 2019 - Aug 2019

BMW Group, *Munich*

- Developed iOS and Android applications that interact with an Ethereum Blockchain using *Flutter (Dart)*, *Web3*, *Solidity*.

Student Teaching Assistant - Various Computer Science Classes

Apr 2016 - Sep 2017

University of Münster, *Münster*

- Assisted in teaching and grading for the courses *Datastructures and Algorithms* (two semesters) and *Computer Structures and Operating Systems* (one semester).

TECHNICAL SKILLS

Proficient C++, Python

Familiar PyTorch, Tensorflow, Java, Javascript

EDUCATION

PhD Secure Multiparty Computatio, Technical University of Munich (TUM)

since Dec 2020

MSc Information Systems, Technical University of Munich (TUM), **GPA: 1.4/1.0**

Apr 2018 - Mar 2021

BSc Information Systems, University of Münster (WWU)

Oct 2014 - Mar 2018

Experience abroad: University of Southern California (Visiting Researcher), **Shanghai Jiaotong University** (Exchange Student), **University of Sydney** (2017, Research Assistant)

HONORS & AWARDS

Leading Publications Three publications in **A-ranked** cryptography venues (eprint: [2024/386](#), [2024/1371](#), [2024/1953](#)).

Google Munich Hackathon 2019 Won **first place** for building an **app** that teaches how to code (20+ teams).

Google Munich Hackathon 2018 Won **first place** for building a flashcard training **chatbot** (22 teams).

Intercultural Certificate Awarded by the university for **mentoring** incoming exchange students, helping at events.

Volunteering Certificate Issued by SBH-West for **tutoring** high-school students who cannot afford paid lessons.