



TOBIAS THIEL

SOFTWARE ENGINEER

ABOUT

Versatile software developer with expertise in RF technology, embedded development and international experience. I strive to solve large, complex problems and would like to be involved in global projects.

CONTACT

+49 15775468443

accounts@tobiasthiel.net

Wiesbaden, Germany

tobiasthiel.net

EDUCATION

2024 - 2024

KOREA ADVANCED INSTITUTE
OF SCIENCE & TECHNOLOGY
(KAIST)

- Master Computer Science
(Exchange Semester)

2021 - 2024

TU DARMSTADT

- Master Computer Science
GPA 3.4/4.0

2017 - 2021

HOCHSCHULE RHEINMAIN

- Bachelor Computer Science,
Minor in Media

LANGUAGES

- German (native)
- English (fluent)
- Korean (Intermediate)

WORK EXPERIENCE

Student Assistant

Mar. 2023 - Sep. 2023

University of RheinMain | Subato Learning Platform

- Maintaining a coding assignment submission validator written in GO
- Expanding an IntelliJ IDE plugin enabling students to easily retrieve, test, and submit their assignments to the learning platform

Lectureship - Programming Methods

Apr. 2022 - Nov. 2022

University of RheinMain

- Teaching students basic and advanced programming fundamentals and techniques in Java and C
- Supervised and graded student assignments

Data Scientist Internship

Nov. 2020 - Apr. 2021

Commerzbank | Big Data and Advanced Analytics

- Building a fuzzy-matching algorithm to associate customer interactions from bank-transaction data
- Evaluating space and time complexity and quality of the result of the fuzzy-matching algorithm
- Google Cloud project interface to sales analytics legacy systems. Keeping track of the dataset and uploading only the delta of newly created data

Junior Software Engineer

Aug. 2018 - Sep. 2020

boTec GmbH | m:pro IT Consult GmbH

- Building a pipeline using Gitlab CI/CD and NodeJS to streamline and automate software testing
- Significantly reducing the workload of the department responsible for software testing

SKILLS

Programming: Java, Python, C/C++, Go, JavaScript, TypeScript, Matlab, C#, REST

Frameworks: React, Node.js, Flask, JUnit, PlatformIO

Developer Tools: Git, Docker, Kubernetes, VS Code, Visual Studio, PyCharm, IntelliJ, GNURadio, EasyEDA, Fusion360, Gitlab CI/CD

Libraries: polars, pandas, NumPy, Matplotlib, Arduino, PyTorch, PRAW, Streamlit, MongoDB

Others: Driving License Class B



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PROJECTS

- Master's Thesis** Jun. 2023 - Feb. 2024
Matlab, PyTorch, C++, Python, SDR
 - A novel multi-modal wireless sensing approach combines WiFi radio emissions as radar and location data provided by an IR motion capture system to precisely validate a large set of algorithms against it.
- NanoTrack | PCB Design** Okt. 2022 - Apr. 2023
EasyEDA, Arduino, ESP32-C3 RISC-V
 - Developing a stackable 2€ coin size four-layer PCB for human-computer interaction with 9DoF IMU, I2C & SPI passthrough, USB-C for charging and flashing on a four-layer inspired by the PicoclickC3 project.
- LoRa real-time mapping system | Wireless** Apr. 2022 - Sep. 2022
Python, ReactJS, MQTT, LoRa, NodeJS
 - Building a LoRa end-device that transmits to multiple ChipStack gateways distributed across Darmstadt city.
 - Developing a backend to receive, process, and display the signal strength and link quality at their measured GPS location onto a real-time map with filtering and export capabilities built with ReactJS.
- Smart Smoothie Squisher | Electrical Eng.** Mai 2019 - Jun. 2019
Arduino, BluetoothLE, ESP32
 - Developing a novel method to interact with a bartender machine using ESP32's, force-sensitive resistors, 3D printed cases, Bluetooth Low Energy GATT, and a foam fruit.
 - Depending on the fruit and force the corresponding pump runs faster or slower.

AWARDS

- IT Scholarship** Nov. 2022
Deutsche Bank
- Digital Seeds 2022 Entrepreneurship** Apr. 2022
Huawei | Metaverse
 - Entrepreneurship competition with 200 students - development of a business concept for a start-up, marketing, and successful pitching over two rounds.
- German public-private scholarship** Okt. 2019 - Okt. 2020
SER Group & Federal Ministry of Education and Research (BMBF)
- German public-private scholarship** Okt. 2018 - Okt. 2019
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