

# NICO BÖCKHOFF

Graefestraße 42, 10967 Berlin, Germany  
+4915772016846  
[nico.boeckhoff@gmail.com](mailto:nico.boeckhoff@gmail.com)  
[linkedin.com/in/boeckhoff/](https://www.linkedin.com/in/boeckhoff/)  
[github.com/boeckhoff](https://github.com/boeckhoff)  
[boeckhoff.eu](http://boeckhoff.eu)

IT Systems Engineering Master's Student with a passion for embedded systems and microcontrollers

## Education

### [Hasso-Plattner-Institute](#), Potsdam

- **M. Sc. IT-Systems Engineering** 04/2018 – 08/2021
- **Design Thinking Basic Track**, [link](#) 10/2017 – 03/2018
- **B. Sc. IT-Systems Engineering** 10/2014 – 08/2017

### [Indian Springs School](#), Alabama, US

- **High School Diploma** 10/2011 - 08/2012

## Experience

### [HackHPI](#) / Hasso-Plattner-Institute, Potsdam

#### Founder & Organizer

2015 – 2017

- Founded and organized an ongoing yearly hackathon funded by IBM, SAP, Wikidata and others.
- Developed the concept, raised sponsorship money (8k first year, 20k second year) and managed the budget.
- Led the organizer team, coordinated volunteers and communicated with partners & participants.

### [Human Computer Interaction Lab](#) / Hasso-Plattner-Institute, Potsdam

#### Research Assistant

12/2019 – 06/2020

- Designed and developed a [portable 6DOF haptic gaming console for blind people](#).
- Designed the electronics including: part selection, BOM, schematic capture and PCB routing in KiCad.
- Developed c++ firmware (motor control and SPI communication interface for precision encoders).
- Led the effort to produce 10 devices to be used for teaching undergraduates.
- Gave a lecture to bachelor students about PCB Design.

#### Research Assistant

09/2017 - 03/2018

- Developed c++ firmware for a haptic gaming device.
- Ported the firmware to a stm32 microcontroller.
- Developed a Unity Framework to expose functionality of the device to game developers.

### [Freigeist Lab](#) / Berlin

#### Embedded Systems Engineer, Hardware Engineer

10/2018 – 03/2019

- Developed an embedded framework in c++ for a [hardware toolkit](#) to communicate with a Python server.
- Designed the electronics, including: part selection, BOM, schematic capture and PCB routing in KiCad for a custom hardware toolkit including IOT sensors and actuators based on the ESP8266.

## Skills

- Software engineering (c, c++, python, javascript)
- Embedded systems and microcontrollers (ESP32(WROOM), STM32/8, ATtiny, ATmega)
- Designing Schematics and PCBs with KiCad
- 3d-modeling using Autodesk Fusion360
- Communication Protocols (UART, SPI, I2C, DMX, BLE, RS232)
- Oscilloscopes, reflow-soldering, stencils
- Fabrication tools: lasercutters, 3d-printers and CNCs
- 5 years experience using Linux and git

## Community Engagement

**Student Club Leader - [Club Connect](#)** (2016-2017): Led a 30-person student club dedicated to connecting students to potential employees through organizing dozens of events including career fairs, exchanges & other events. Awarded best student-club of the year award under my leadership.