

JULIUS COSMO ROMEO RUDOLPH, M.Sc

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Proactive, ambitious and versatile software engineer with the desire to create products that improve mental health and help people reaching their full potential. In over 5 years developing software I've gained thorough experience in mobile (React Native, Android), full stack (Node, Django), Unity and Python engineering as well as in product management, interaction design and Design Thinking.


Projects

Accessibility, Haptics, Unity, C++, PM	• DualPanto (2020-21; Master Thesis): Enabling interactive gaming for the blind by porting Doom to a novel haptic device. My role involves game and framework development (Unity), project management of a 4-person team, UX design and firmware development (C++).
Wearables, Research, ML, Python	• Ubiquitous Controls (2020): Developed a Python ML system using SciKit, Pandas and TSfresh to recognize in-air hand gestures using a novel capacitive wristband (1 st author of pending UIST 2021 paper with 4 senior HCI researchers from Tactual Labs).
Mental Health, ML, Python, PM	• OCD recognizer (2020): Engineered an OCD detection system (Python, SciKit) using activity recognition from smartwatch data and indoor localization with Bluetooth Low Energy beacons.
React Native, Django	• MyCrew (2019): Developed core mobile & backend features during internship using React Native & TDD Django (> 50k downloads and > 10k MAUs). Worked closely with the CTO and 3 senior engineers.
Fab, Research	• SpringFit (UIST 2019): Engineered a tool to make laser cut models portable across cutters.
Accessibility, Python	• Freigeist (2019): Developed 2 interactive Python systems and a custom hardware toolkit for the inclusion of cognitively impaired people that are used on a daily basis (Gastro Founder's Price 2019).
React Native, Node	• Hitzeroad (2018): Developed mobile app and API from scratch in a team of 3 using React Native, NodeJS, Nginx and MongoDB.
Accessibility, Haptics, Android	• Linepod (WHC 2017): Engineered an interactive, mobile, laser-based plotter for the blind with infrared-based touch-on-paper interactivity and an Android/d3.js software framework including 6 applications.

Work Experience

 HCI Research Intern / Tactual Labs & University of Toronto, Toronto	02/2020 – 05/2020
 Mobile & Backend Engineering Intern / myCrew, Los Angeles	04/2019 – 11/2019
 Software Systems Engineer / Freigeist Lab, Berlin	10/2018 – 03/2019
 Lead Mobile Engineer / Hitzeroad U.G., Berlin	11/2017 – 10/2018
 Research Assistant Semantic Web / Hasso-Plattner-Institute, Potsdam	10/2016 – 10/2017
 Research Assistant System Analytics / Hasso-Plattner-Institute, Potsdam	04/2015 – 09/2016

Education

 Hasso-Plattner-Institute, Potsdam	(#1 CS university in Germany, CHE ranking 2019)
M. Sc. IT-Systems Engineering / Current grade: 1.3 / GPA: 3.7	10/2017 – 04/2021
Design Thinking Basic Track / Final grade: 1.0 / GPA: 4.0	10/2017 – 03/2018
B. Sc. IT-Systems Engineering / Final grade: 1.6 / GPA: 3.4	10/2014 – 09/2017

Extracurricular Activities

Student volunteer at UIST 2019 in New Orleans	10/2019
Voluntary leader of student's 'Sport's Club' at HPI with ~25 members	04/2016 – 10/2017
2nd prize 'HackHPI 2017' hackathon	06/2017
'Work and Travel' journey through Australia with jobs ranging from door-2-door sales to farm-work	08/2013 – 05/2014