# Dr. rer. nat. Krishna Subramanian

# Head of Software Engineering

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• Aachen, Germany German

#### About me

Software leader with over 10 years of experience in SWE, including more than four years in the industry. Currently, I lead the SWE team at devolo solutions GmbH ② in Aachen. Previously, I earned my PhD in the Media Computing Group ② under Prof. Jan Borchers ② and Prof. Paul Cairns ② at RWTH Aachen University. My research was honored with a Best Paper (Honorable Mention) Award at CHI 2021 and was presented at the Student Research Competition at CHI 2014.

# Work Experience

## Produkt Manager | Ex-Senior Software Engineer,

05/2021 - Present | Aachen, Germany

devolo solutions GmbH 🛮

- Gathered comprehensive stakeholder requirements and extensive customer data to define MVPs for devolo's software portfolio, encompassing both B2C and B2B domains.
- Collaborated closely with product owners to define and manage an overarching vision and strategy, as well as detailed roadmaps.
- Assisted product owners in significantly enhancing usability through the use of Figma prototypes and design sprints; coordinated product development activities and effectively communicated the product vision.
- Set up and managed a Jupyter server for advanced analytics to support data-driven decision-making processes, such as analyzing customer churn, calculating customer lifetime value, and evaluating software performance.
- Served as the principal contributor to the design and development of the flagship app for managing network adapters, which serves 50,000 users per month.
- Acted as the sole developer and maintainer of hawkBit, overseeing the management of over 4 million products.
- Developed a range of tools to optimize internal workflows, including a comprehensive dashboard for monitoring firmware rollouts and automating the collection of user reviews data.
- Supervised several Bachelor's, Master's, and MATSE students, providing guidance on their theses and technical projects.

#### Research Assistant,

08/2014 - 09/2020 | Aachen, Germany

Media Computing Group, RWTH Aachen University 🗷

- My research is at the intersection of data science and human-computer interaction, aimed at helping data workers gain meaningful insights. I collaborated with renowned machine learning engineers and data scientists globally.
- Successfully led multiple engineering projects, notably ARPen 2, an innovative iOS app for 3D modeling in augmented reality using an iPhone and a DIY stylus.
- Taught the flagship course "Designing Interactive Systems" for six years (with over 150 participants in a semester), creating a hands-on learning environment for designing and developing interactive applications.
- For an overview of my mentoring and projects, please visit my landing page in the research lab: https://hci.ac/subramanian 🗷 .

**Software Engineer, INFORM GmbH** 

07/2015 - 10/2015 | Aachen, Germany

Developed and built a web-based application for visualizing evacuation scenarios in major German cities.

## Education

**RWTH Aachen University,** Doctorate in Computer Science 08/2014 - 09/2020 | Aachen, Germany **RWTH Aachen University,** Master's in Computer Science 09/2011 - 02/2014 | Aachen, Germany 07/2007 - 05/2011 | Coimbatore, India

Amrita University, Bachelor's in Computer Science

Skills

## **Product Management**

Stakeholder management, roadmaps, OKRs, MVPs, program strategization, und business case analysis.

### **Design and illustrations**

Design sprints, Figma, Balsamig, and Miro.

#### **Data analysis**

Regression, generative models, neural networks, SVMs, Bayesian inference und hypothesis testing.

#### **User studies**

Interviews, A/B tests, observation studies (contextual design), surveys, card sorting und video analysis.

#### **Tools**

Jira, Confluence, Jenkins, ELK Stack, Jupyter, Notion, Docker, Git, and MS Office.

#### **Programming**

Flutter, Java, Angular, Python, R, SQL, Bash, and

# Sprachkenntnisse

**English** 

Native Limited working proficiency (~B2)

## Selected Publications

Lowering the Barriers to Hypothesis-Driven Data Science, 06/2022

Doctorate thesis, RWTH Aachen University ☑

Krishna Subramanian

From Detectables to Inspectables: Understanding Qualitative 05/2021

**Analysis of Audiovisual Data,** 

Full Paper at CHI '21; Best Paper (Honorable Mention) Award. 🗷

Krishna Subramanian, Johannes Maas, Jan Borchers, and James Hollan

08/2020 Casual Notebooks and Rigid Scripts: Understanding Data

Science Programming, Full Paper at VL/HCC '20 ☑

Krishna Subramanian, Nur Hamdan, and Jan Borchers

**TRACTUS: Understanding and Supporting Source Code** 04/2020

**Experimentation in Hypothesis-Driven Data Science.** 

Full Paper at CHI '20 🗷

Krishna Subramanian, Johannes Maas, and Jan Borchers

For a complete list of my publications, see here. ☑

# Declaration

I hereby declare that all information provided in this CV is true and correct to the best of my knowledge.

Krishna Subramanian Aachen, 09/2025

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