Tim **Kräuter**

SOFTWARE ENGINEER II · PH.D. CANDIDATE · MASTER OF SCIENCE

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Experience

Microsoft
Oslo, Norway

SOFTWARE ENGINEER II
Nov. 2024 - Present

- I am working on core M365 services impacting millions of people worldwide.

Western Norway University of Applied Sciences
Bergen, Norway

PH.D. CANDIDATE IN SOFTWARE ENGINEERING
Oct. 2020 - Nov. 2024

- During my Ph.D. I developed many tools, mainly using **Java**, **JavaScript**, and **Rust**, as you can see in the projects below.
- I contributed to open-source projects in the **bpmn-js** ecosystem, such as *bpmn-lint*, *bpmn-js-token-simulation* and *diagram-js*.
- I was a lecturer and teaching assistant in a course about **Android development** and **Advanced Software Technologies**, i.e., system integration using web services, shared databases and messaging. The programming languages used were **Java** (back-end) and **JavaScript** (front-end).

SET GmbH
Hanover, Germany

SOFTWARE ENGINEER
Oct. 2018 - Oct. 2020

- I was part of a team **redesigning** the company's old production management system in **Java**. Before that, we implemented an Android app for one of our customers as a hybrid app based on web technologies. The app is vital to the letter production process and ensures the correct production of thousands of letters daily.

Education

Ph.D. in Computer Science (anticipated completion February 2025)
Bergen, Norway

WESTERN NORWAY UNIVERSITY OF APPLIED SCIENCES
Oct. 2020 - Present

- I am working as a Ph.D. student in model-driven software engineering. I research executable models, such as process models and state machines, to find control-flow errors or inconsistencies. As a result, one can find and fix errors early during development, preventing potential significant costs later in the development process.

Master of Science in Information Engineering
Hanover, Germany

FHDW HANOVER
Oct. 2018 - Apr. 2020

- GPA: 4.0/4.0, Grade A
- I was studying part-time while working full-time as a Software Engineer at SET GmbH.
- Thesis: Development of semantics for the execution of production processes for the production management of the SET GmbH.

Bachelor of Science in Business Computing
Hanover, Germany

FHDW HANOVER
Oct. 2015 - Oct. 2018

- GPA: 3.7/4.0, Grade A
- I was studying while working at VHV-Group.
- Thesis: Developing a framework for the automated testing of BPMN processes in the VHV.

Skills

Languages	German (native), **English** (fluent), **Norwegian** (fluent), **French** (semi-fluent)
Programming	**C#**, **Java** (Spring, Gradle), **Typescript & JavaScript** (Angular, Ionic, HTML, CSS, bpmn-js), **Rust** (axum, tokio)
Programming Concepts	**Version Control**, **Concurrency**, **OOP**, **CI/CD** (GitHub Actions, Jenkins), **Containerization** (Azure, GCloud)

Projects

BPMN Analyzer 2.0
Bergen, Norway

RESEARCH PROJECT
Nov. 2023 - PRESENT

- I implemented an **analyzer** in **Rust** to automatically **find, display and fix control-flow errors** in a BPMN model by exploring all possible states.

Visual Debugger
Bergen, Norway

RESEARCH PROJECT
May. 2021 - PRESENT

- I developed an **IntelliJ IDEA plugin** which **visualizes the variables during debugging** as an object diagram which has over **10.000 downloads**.

Smart CoP
Hanover, Germany

PERSONAL PROJECT
Dec. 2019 - PRESENT

- I created an **Android app** and a **progressive web app** for gymnastics, which automatically calculates the difficulty score for gymnastic routines.