

# Tim Kräuter

SENIOR SOFTWARE ENGINEER · PH.D.

✉ developer@timkraeuter.com | 🏠 timkraeuter.com | 📱 timkraeuter

## Experience

### Microsoft

SENIOR SOFTWARE ENGINEER

*Oslo, Norway*

*Sept. 2025 - Present*

- I am working on planet-scale backend M365 services using **C#** that impact millions of people worldwide that use OneDrive, Outlook, and similar M365 applications.

### Microsoft

SOFTWARE ENGINEER II

*Oslo, Norway*

*Nov. 2024 - Aug. 2025*

### Western Norway University of Applied Sciences

PH.D. CANDIDATE IN SOFTWARE ENGINEERING

*Bergen, Norway*

*Oct. 2020 - Oct. 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

SOFTWARE ENGINEER

*Hanover, Germany*

*Oct. 2018 - Sept. 2020*

- I was part of a team **redesigning** the company's old production management system in **Java** that is vital to ensure correct physical mail production of thousands of letters per day. Before that, we implemented an Android app for one of our customers as a hybrid web-app.

## Education

### Ph.D. in Computer Science

WESTERN NORWAY UNIVERSITY OF APPLIED SCIENCES

*Bergen, Norway*

*Oct. 2020 - Sept. 2025*

- I did a Ph.D. in model-driven software engineering. I researched 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

FHDW HANOVER

*Hanover, Germany*

*Oct. 2018 - Apr. 2020*

- GPA: 4.0/4.0 (**Grade A**), 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

FHDW HANOVER

*Hanover, Germany*

*Oct. 2015 - Oct. 2018*

- GPA: 3.7/4.0 (**Grade A**), 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

RESEARCH PROJECT

*Bergen, Norway*

*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

RESEARCH PROJECT

*Bergen, Norway*

*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

PERSONAL PROJECT

*Hanover, Germany*

*Dec. 2019 - Apr. 2025*

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