

Tim Kräuter

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

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

Education

Ph.D. in Computer Science (anticipated completion September 2024)

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
- Studying while working as a Software Engineer at SET GmbH.
- Thesis: Entwicklung einer Semantik zur Ausführung von Produktionsabläufen für das Produktionsmanagement der SET GmbH (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
- Studying while working at VHV-Group.
- Thesis: Konzeption eines Frameworks zum automatisierten Testen von BPMN-Prozessen in der VHV (Conception of a framework for the automated testing of BPMN processes in the VHV).

Skills

Languages German (native), English (fluent), Norwegian (fluent), French (semi-fluent)

Programming Java (Gradle, Maven, Spring), Typescript & JavaScript (Angular, Ionic, HTML, CSS, diagram-js, bpmn-js), Rust

Programming Concepts Version Control (Git, SVN), CI/CD (Jenkins, GitHub Actions), Agile Development, Test-Driven Development

Experience

Western Norway University of Applied Sciences

Bergen, Norway

PH.D. CANDIDATE IN SOFTWARE ENGINEERING

Oct. 2020 - Present

- During my Ph.D. I developed many prototypes mainly using **Java**, **JavaScript**, and **Rust**, as you can see on my website. In addition, I contributed to open-source projects in the **bpmn-js** ecosystem, such as *bpmn-lint* and *bpmn-js-token-simulation*.

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 a vital part of the letter production process and ensures the correct production of thousands of letters each day.

VHV-Group

Hanover, Germany

WORKING STUDENT

Oct. 2015 - Oct. 2018

- Dual course of study while acquiring a bachelor's degree in business computing. I mainly worked with **Java** to extend the testing framework for our business processes implemented with the Camunda Workflow Engine and automate GUI regression testing with Selenium.

Projects

Rust BPMN Analyzer

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 **9000 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.