

# Tanks Transfeld

## Software Developer and Educator with a background in Art & Science

Open Source enthusiast who loves working at the edge between humans and technology. Currently in training for data science. 4 years of experience in writing curriculums and training material for Rust and prototyping in embedded Rust. 10 years of experience in teaching and designing of teaching materials and assessments. Interested in research, hacking and making.

### CURRENTLY

#### IU Akademie: *Big Data Developer (Further Education)*

JANUARY 2024 – MAY 2024

- Introduction to data science
- Data wrangling
- Principles of software engineering

#### Sabbatical: *Art, Programming and Biking*

JULY 2023 - DECEMBER 2024

### PROFESSIONAL EXPERIENCE

#### Ferrous Systems GmbH, Berlin — *Software Engineer for Training and Development*

MARCH 2019 – JUNE 2023

- Software development in Rust & Embedded Rust
- Design of new training formats and materials
- Trainer for Embedded Rust
- Support of the internal training team with continual education in didactics and methodology
- Management of training sales

#### Professional Reorientation

MARCH 2018 – FEBRUARY 2019

- learned Python
- tried out other programming languages (JavaScript and Rust)
- looking for entry level jobs in Python

#### Hannah-Arendt-Gymnasium, Berlin — *Teacher*

FEBRUARY 2015 – FEBRUARY 2018

Teacher for Chemistry and Art for grades 7-12

### CONTACT

cv@transfeld.net

github: Mirabellensaft

### REFERENCES

Upon Request

### SKILLS

analytical thinking  
problem-solving  
leadership  
team-oriented

### TOOLS

ClickUp  
Pipedrive  
github

### TECH

Rust  
Python  
SQL  
Linux  
Embedded Programming  
(Bare Metal)  
Electronics (basics)

### LANGUAGES

German (native)  
Englisch (business  
fluent)

# Work Samples

## PROJECTS

### **NDA** — *Prototype of a medical device*

Position: Team Member, back-up leadership

Tasks:

- Bring-up of STM32 based System
- Develop drivers for several sensors
- Take over client communication mid-project

### **esp-rs/std-training** — *Training material for Rust on espressif microcontrollers*

github: [esp-rs/std-training](https://github.com/esp-rs/std-training).

Position: Didactic Lead

Tasks:

- Writing Texts
- Adaptation of code examples to focus on learning goals

### **Knurling Session**— *Learn how to build your air-quality monitor in embedded Rust using the SCD30 CO2 sensor, the nRF52840-DK and a Waveshare ePaper Display.*

github: [knurling-rs/knurling-session-20q4](https://github.com/knurling-rs/knurling-session-20q4)

Position: Solo project within the knurling-rs team at Ferrous Systems

Tasks:

- Development of firmware including drivers for the sensors
- Writing texts
- Didactic design

### **Rust Training** — *Major revision of Ferrous Systems' Rust training material*

github: [ferrous-systems/rust-training](https://github.com/ferrous-systems/rust-training)

Position: Project Lead

Tasks:

- Formulation of learning goals in cooperation with Trainers and Rust developers
- Adaptation of former training material to the goals
- Conception of code examples
- Optimize material for use of a large number of trainers
- Manage migration to a new platform

## TALKS

### **Emulating a Teacher's Approving Nod in Teaching Material** — *Write the Docs Prague Virtual October 2020*

Designing training material for embedded development trainings, that suddenly needed to be conducted remotely.

youtube: <https://youtu.be/NCxSJXD2RHY>

### **Building a CO2 Measuring Device with Embedded Rust** — *Rust and Tell Berlin November 2019*

How to turn an amount of molecules into a human readable number.

youtube: <https://youtu.be/HybHkK2P3yI>

## ARTICLES

### **Why it is hard to learn another programming language** — *Ferrous Systems Blog, April 2023*

Discussing the findings of a scientific article about the difficulties regarding the learning of a second programming language and how a professional training can help - vs. using opportunistic learning styles.

<https://ferrous-systems.com/blog/why-it-is-difficult-to-learn-another-language-one/>

### **The Compiler is your friend** — *Ferrous Systems Blog, August 2020*

Reframing the infamous saying “to fight the borrow checker” into a learning experience.

<https://ferrous-systems.com/blog/the-compiler-is-your-friend/>

# Education

## Teacher Training

JANUARY 2013 - DECEMBER 2015

- Otto-Hahn-Gymnasium & Humboldt Gymnasium, Karlsruhe
- Teacher in Training for Chemistry and Art for grades 5-12
- Degree: Second State Examination

## Academic Training

OCTOBER 2003 - DECEMBER 2012

- Karlsruher Institut für Technologie, major: Organic and Physical Chemistry
- Staatliche Akademie der Bildenden Künste, Karlsruhe, major: Painting and Graphics
- Degree: First State Examination