

# Markus Zeeb

## Freelance IT Consultant & Software Developer

### Personal Details

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### Profile

#### whoami:

Freelance IT Consultant and Software Developer with (over) 7 years of professional experience.

#### Languages:

Python, Java, Javascript / Typescript, SQL, Clojure, Unix Shell (sh, bash, zsh).

#### Skills & Methods (Selected):

Agile, AI, Backend Development, Cloud Computing & Management, Data Engineering + ETL, DevOps, Funktionale Programmierung, Kanban, LLM, Machine Learning, NLP, REST API Design, SCRUM, System Monitoring, Testing & QA.

#### Industries (Selected):

Chemical & Process Engineering, Digital Farming, Social Media Monitoring, Financial Services.

#### Tools & Tech (Selected):

Ansible, AWS (EC2 / S3 / Glue / Lambda / EKS), Azure, Cassandra, Django, Docker, Emacs, FastAPI, Flask, git, Gitlab, Grafana, Jupyter, Kafka, Kubernetes, LangChain, Linux (Debian / Ubuntu / Red Hat), LLM, Maven, mlflow, numpy, openCV, pandas, poetry (Python), polars, Prometheus, Pydantic, pytest, Quarkus, React, Redis, scipy, sklearn, Solr, spaCy, Spring, Terraform, uv, Zabbix.

## Work Experience

### — Freelancer

**Aug 2020 to now**

**Company:** Markus Zeeb - Softwareentwicklung und Beratung, Stuttgart

**Location:** Stuttgart

Since mid-2020, I have been working independently as a freelance IT Consultant and Software Developer (self-employed).

For detailed information about my projects, including tools and technologies, please refer to the "List of Projects" section at the end of this resume.

### — Personal Sabbatical

**Aug 2024 to Apr 2025**

Between August 2024 and April 2025, I took a professional break to work on a few personal projects and as well as to refresh my knowledge in the field of AI & NLP.

### — Software Developer (Data Engineering)

**Dec 2016 to Apr 2020**

**Company:** Vico Research & Consulting GmbH, Stuttgart

**Location:** Stuttgart

#### Tasks

- Web Scraping / Web Crawling (online forums, web shops, Social Media platforms).
- Work on ETL pipelines and data warehousing solutions for data gathered from web crawls and / or various Web APIs
- Developed a REST API + (simple) web app where customers can “track” products on various websites / web shops.

#### Tech Stack

Languages: Java, Python, Javascript, SQL, “shell scripting”

Technologies: Apache Kafka, Apache Solr, Hibernate, Apache Spark, Kubernetes, Postgres, MySQL, Sqlite, Google Cloud, AWS (EC2, S3), Grafana, Zabbix, Redis, Apache Cassandra, Linux Server (Ubuntu)

Tools & Frameworks: Spring Boot, Scrapy, Ansible, Selenium, Flask, numpy / pandas, IntelliJ, PyCharm, Docker, Jupyter Notebooks

## Education

I have a BA in **General Linguistics** from the University of Konstanz (2014 – 2017).

My major fields of study included computational linguistics, syntax and pragmatics as well as Romance Philology (French + Italian).

## List of Projects (Freelancing)

### — Senior Software Engineer

Jun 2023 to Jul 2024

**Customer:** BASF SE, Ludwigshafen

**Location:** remote

**In collaboration with:** Skilled GmbH

#### Tasks

- Creation and implementation of a Python framework ("AISTore SDK") that makes it easy for ML users of all backgrounds to manage data and experiment setups and conduct ML experiments on various BASF (internal) platforms and services in "a few lines of code"
- Helped developing a REST API platform that makes the functionality of the AISTore SDK accessible from the web

#### Tech Stack

Languages: Python, Javascript, SQL

Technologies: Gitlab (API + Gitlab Runners), Kubernetes, MLFlow, AWS S3, BASF Curiosity

Tools & Frameworks: Flask, FastAPI, Pydantic, mlflow, gradio, numpy, pytest, pandas, sklearn, Docker

### — Senior Software Engineer

Aug 2022 to Mar 2023

**Customer:** BASF Polyurethanes GmbH, Lemförde

**Location:** remote

**In collaboration with:** Skilled GmbH

#### Tasks

- Design and implementation of a REST API & web app for conducting near-infrared spectroscopic measurements / experiments

#### Tech Stack

Languages: Python, Javascript, SQL, bash

Technologies: Flask, Pydantic, PyWin32

Tools & Frameworks: OracleSQL, Sqlite, Contact / Bruker OPUS Lab

## — Software Developer

Jun 2021 to Jun 2022

**Customer:** BASF / Xarvio Digital Farming GmbH, Köln

**Location:** remote

**In collaboration with:** Amoria Bond GmbH

### Tasks

- Helped develop a web app (Django + REST API) for agronomists to collect and manage agronomical data
- Development of a so-called "Threshold function" (AWS-Lambda) that calculates optimal spray rates for herbicide application programs
- Also worked on a web app (Flask + React) that served as a web UI for said threshold function

### Tech Stack

Languages: Python, Javascript, SQL, bash

Technologies: AWS (Lambda, EC2, S3, EKS/ECR), Terraform, Teamcity, Postgres, Ubuntu, Debian (Server), sqlite

Tools & Frameworks: Docker, Django, Flask, Pydantic, pytest, numpy, pandas, React

## — Software Developer (Clojure)

Apr 2021 to May 2021

**Customer:** Finanz Informatik Solutions Plus GmbH, Stuttgart

**Location:** remote

**In collaboration with:** Etengo AG

### Tasks

- Creation and maintenance of business logic modules used in OSPlus and online banking platforms (Sparkassen, Landesbanken)
- Communication and "translation" between customer requirements into technical specification
- VM migration of a "Landesbank" website

### Tech Stack

Languages: Clojure, Java, shell (bash)

Technologies: OSPlus, DynS, DynPro, Red Hat Enterprise Linux (Server)

Tools & Frameworks: Spring Boot

## — Software Coaching (Python)

Nov 2020 to Nov 2020

**Customer:** Workmation, Stuttgart

**Location:** remote

### Tasks

- Weekly one-on-one coaching sessions, teaching a junior dev about Python + SWE basics
- Support and guidance for said student during the initial stages of a computer vision project (Python + openCV)

### Tech Stack

Languages: Python

Technologies: -

Tools & Frameworks: numpy, pandas, pytest, openCV