## **Thomas Kreidl**

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#### **Software Developer**

Passionate about mastering new technologies and seamlessly integrating them into my expertise. Specialized in data-driven solutions, I make informed decisions through statistical analysis and Al implementation. I prioritize scalability in system design to ensure smooth future expansions.

#### **WORK EXPERIENCE**

### **CaptiVR**

## Software Developer • Part-time • 08/2024 - Present

• Development of a Blazor web application with static server-side and interactive components, tenant-specific user authentication, payment processing, and integration of an EF Core database.

#### Siemens

### Masters thesis • 11/2023 - 06/2024

 Generation of structured text (SCL) using a language model (LLM) and optimization through the integration of a knowledge base with enhanced generation via a retrieval-augmented generation (RAG) component.

## Technische Hochschule Nürnberg Georg Simon Ohm Student Assistant • 07/2022 - 10/2022

 Programmierung von UX und Backend für Orca-Tonaufnahmen. Implementierung und Analyse von Einbettungen und dichte vektorbasierte Suche nach ähnlichen Klangabschnitten mit Elastic Search.

#### Syntegon

#### Bachelor Thesis • 10/2021 - 02/2022

• Programming of UX and backend for Orca audio recordings. Implementation and analysis of embeddings and dense vectorbased search for similar sound segments using Elastic Search.

#### **Bosch**

#### Application developer • 01/2017 - 08/2017

• Migration and validation of Siemens TIA software.

### Mechatronics engineer • 09/2013 - 01/2017

• Vocational training as a mechatronics technician.

#### **SKILLS**

Android Development, Azure Cognitive Services, C#, C++, CI/CD, Data Science, Deep Learning, Docker, Elasticsearch, Gameification, Git, Gitlab, Information Retrieval, Java, Kotlin, Machine Learning, Master of Science in Informatik, Mobile App Development, .NET, .NET Framework, PLC Programming, Python, Siemens TIA Portal, TIA Openness API, Unity, Visual Studio, Vue.js

#### **EDUCATION**

#### Master of Science - MS in Informatik in Informatik

Technische Hochschule Nürnberg Georg Simon Ohm 03/2022 - 06/2024

#### Bachelor of Engineering - BE in Elektrotechnik und Informationstechnik

Technische Hochschule Nürnberg Georg Simon Ohm 09/2018 - 03/2022

#### **PROJECTS**

## Analysis of politicians' tweets to study political communication. • 10/2022 - 01/2023

Analyzed Twitter data to examine the communication patterns of German MPs around the 2021 federal election. Shifts towards the "Traffic Light Coalition" (SPD, Greens, FDP) were assessed by comparing interactions before and after the election. The Girvan-Newman algorithm identified MP clusters, and network metrics were used to evaluate changes.

# An alternative approach to identifying n-calls in audio tapes. • 03/2022 - 09/2022

Developed a method for detecting similar segments in audio sequences using machine learning. A dense vector field in Elasticsearch performs the similarity analysis.

## Sleepest - Smart Android alarm clock with automatic sleep detection. •

02/2021 - 02/2022

Development of an Android app for automatic sleep detection. The time of falling asleep, wake-up time, and sleep phases of the user are fully recorded in the background on the mobile device.

## Comparison of neural network models for predicting the power output of photovoltaic systems.

The study compares neural network models for predicting the performance of photovoltaic (PV) systems using spatiotemporal data. Machine learning models forecast daily power output based on weather data and meta-parameters.