# Justus Tobias 2

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## **Education**

JKU, Bachelor of Science in Artificial Intelligence

- Anticipated Graduation: July 2024
- Study Language: English •
- relevant Courses: Numerical Optimization, Machine Learning Un- / Supervised Techniques, Machine Learning Pattern Classification, Mathematics for AI, Basic Methods of Data Analysis

## **Projects**

### Pixel Inpainting, University Project

Developed a **Convolutional Neural Network** for generating missing pixel values with an accuracy of 95% by training on a diverse data set and using Data augmentation methods like rotations

## Bird Call Classifier, University Group Project

- Implemented a Neural Network, Long Short-Term Memory and Random Forest for predicting the correct bird per Audio Segment with an F1-score of 92%, using feature selection & post-processing
- Demonstrated exceptional **teamwork** and technical skills, resulting in a high performance on the challenge server, scoring 8,872 out of 11,500 possible points

## Music Recommender, University Project

• Designed an accurate memory-based ItemKNN Recommender System, achieving a 94% accuracy of predictions by optimizing parameters to imporve the accuracy of music recommendations.

## Indoor Positioning System, Own Project

Created a real-time and accurate Indoor Positioning System, accurately predicts current location with a 91% accuracy. Utilized **Random Forest** algorithm for robust positioning performance.

## Chat Bot, Own Project

- Developed a self-hosted Llama2 API to power a Chatbot interface, ensuring fast response times & providing accurate answers, leveraging context-awareness for improved conversational capabilities
- Implemented various system prompts during testing to optimize the Chatbot's performance in delivering tailored responses for different purposes, enhancing user engagement and statisfaction

## Experience

### IT-Hotline, EMP-IT GmbH

- Provided swift and efficient IT support to hospital personnel, managing a high volume of technical inquiries and troubleshooting requests amid the challenging demands of the COVID-19 pandemic
- **Collaborated** with the IT team to diagnose and resolve issues, ensuring uninterrupted technology support for the hospital's daily operations and patient care during the pandemic

## **Personal Summary**

As an enthusiastic AI student, I am deeply committed to cutting-edge research and contributing to innovative projects. Collaboration is at the heart of my approach, valuing diverse perspectives and fostering a positive atmosphere through effective communication. With a strong bias for action, I fearlessly take initiative and embrace ambitious goals. My interests span across different disciplines, and curiosity drives my passion for staying updated with the latest advancements. I thrive on self-motivated learning, always seeking to broaden my horizons. Being part of a vibrant community and making meaningful contributions excite me as I embark on a journey of continuous growth and self-directed learning.

March 2021 - October 2021

October 2021 - Present