# **Christoph Sonntag**

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## **Career Objective**

Recent computer science graduate with skills in building, training, evaluating and deploying deep learning models. Multiple years of hands-on experience consulting, building and maintaining software products in the web. Focusing on trustworthy AI with topics in Explainable and Interpretable Machine Learning, Distributed ML and Digital Humanism. Seeking to use my experience and research interests professionally.

#### Skills

Data Science/Machine Learning Programming Backend and Infrastructure Languages TensorFlow, NumPy, Seaborn, Jupyter, Flower, NLTK Python, Java, Scala, PHP, JavaScript (TypeScript, node.js, Vue.js, React) PostgreSQL, Redis, Docker, AWS EC2;S3;Sagemaker, MODBUS English (full proficiency), German (native), French (basic)

LinkedIn

#### Education

## M.Sc. Computer Science

University of Vienna ♂, Austria, Mar 2024

## **B.Sc. Internet Computing**

University of Passau 🗗 , Germany, Dec 2020

- Research on Federated Learning, NLP, Explainable and Interpretable MLC, Cloud and Edge Computing and Digital Humanism C
- Thesis on ResNets, enabling very deep neural network architectures (implemented in Python using Tensorflow)

## **Work Experience**

#### Student Researcher

SBA Research, Vienna, Austria Oct 2023 - Mar 2024

#### Lecturer

ZKK, University of Passau ♂, Germany Oct 2017 – Jul 2018

#### Software Developer

dialog sued ♂, Munich, Germany Jan 2016 – Oct 2020

- Research for my master's thesis that deals with backdoor attacks on NLP models in Federated Learning, a distributed ML approach of collaboratively training a joint model on the union of multiple client datasets
- Designed and gave the course "Programmieren: Grundkurs" ☐ (4.47/5 average rating), which is still held today.
- Introduced students to programming concepts and programming with Python.
- Software Development with Python, Django, Docker, Javascipt/Typescript, iQuery, PHP.
- Full responsibility of software development on most projects.

### **Projects**

#### MMetering ☑, Smart Metering App for Community Houses, client project

2018

 Dockerized Django application for scheduling requests to connected meter and electrical charging stations using the MODBUS protocol and Redis as a message broker. Resulted in an estimated 12% reduction in electricity costs.

#### Clossyne ☑, Distributed key-value store using Akka and Scala

2023

- Based on binary search-tress, it can be easily accessed by a Python API and makes use of the Actor ☐ model

#### **Further Experience**

Summer Institute of Computational Social Sciences ♂, Università degli Studi di Roma "Tor Vergata"

Jun 2023

- Topics on Trustworthy AI, Research Ethics and NLP

# **Elected Student Representative**, University of Passau

Apr 2016 - Aug 2020

- Team Lead, managing 100 volunteers in campus-wide event with >20k revenue