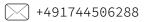
Mert Kurttutan





kurttutan.mert@gmail.com





EXPERIENCE

AON | MACHINE LEARNING DEVELOPER | DOCKER | AZURE | PYTHON | PYTORCH August 2022 - Present | Remote, Part-time, Germany

- → Developed Automatic Speech Recognition micro-service with FastAPI needed for Research Team,
- → Worked on a project to automate cheating detection using deep learning model for tabular data.
- → Collected Resume Data and (working on) NLP solutions to process resume for better candidate evaluation

UNIVERSITY OF AMSTERDAM | RESEARCH INTERNSHIP

May 2019 - August 2019 | Amsterdam, Netherlands

- → Worked on research about classification of topological insulators using numerical methods and reported on weekly basis to the team of Prof. van Wezel
- → Co-authored publication on Phy Rev B. To see the paper, click here

 $\begin{array}{c|c} \textbf{LMU MUNICH} & | \ \mathsf{RESEARCH} \ \mathsf{INTERNSHIP} - \mathsf{HIGH} \ \mathsf{PERFORMANCE} \ \mathsf{COMPUTING} \\ \textbf{July 2021 - September 2021} \ | \ \textbf{Online} \end{array}$

- → Conducted numerical simulations on crystalline systems using tensor network methods, e.g. DMRG, to study magnetic properties and used HPC Clusters
- → Co-authored publication on Phy Rev B. To see the paper, click here

SABANCI UNIVERSITY | TEACHING ASSISTANT FOR LINEAR ALGEBRA AND ABSTRACT ALGEBRA January 2016 - May 2020 | Istanbul Turkey

→ Conducted Recitation classes, Prepared Quizzes and Graded assignments

PROJECTS

NBA MATCH RESULT PREDICTION | AWS, APACHE AIRFLOW, XGBOOST, TF, | github link

- → Extracted data from nbastats endpoint using api, webscraping proxies; used Apache Airflow, AWS EventBridge and ECS to automate data processing
- ightarrow Implemented DNN and boosted tree to predict match results, val accuracy $\sim 74\%$
- → Deployed containerized web app for prediction using Flask and AWS ECS

OBJECT DETECTION | PYTORCH, TENSORFLOW, TFX | github link

- → Extracted data from datasets, COCO, VOC, BDD100K, using XML/JSON and analyzed features
- → Implemented Pytorch and Tensorflow version of YOLOv2 architecture (darknet19) and implemented hyperparameter tuning process with Optuna and KerasTuner
- → Created deployment pipeline using TFX, and deployed on Kubernetes on Google Cloud using Kubeflow

SALES PREDICTION | PYTHON | github link

- → Conducted Data Analysis, Feature Extraction and Dashboard App on sales dataset
- → Used tree-based ensemble methods via Xgboost, sklearn to make prediction of future sales and Implemented stacking method
- → Implemented app for sales prediction using FastAPI and Docker

AUCTION WEB APPLICATION | PHP, MySQL, C++ | github link

- → Implemented ETL process and database with features e.g. trigger, buffer manager
- → Implemented web application that conducts process of bidding using PHP and CSS

SKILLS

PROGRAMMING

Proficient:

MATLAB • Scala • MySQL • PostgreSQL • Bash

Experienced:

Python • Julia • LATEX • C++

TOOLS/PLATFORMS/OS

Git • Docker • Kubernetes •
CMake • Linux • Google Cloud
Platform / AWS • TensorFlow,
TFX • Pytorch • Kubeflow/Airflow/FastAPI/django

PUBLICATIONS

- Topological invariants of rotationally symmetric crystals
- Ferromagnetism and Skyrmions in the HFH Model

EDUCATION

FREIE UNIVERSITÄT BERLIN

MASTER'S IN PHYSICS (QUANTUM INFORMATION THEORY)
Sep 2021 - Present | Berlin

SABANCI UNIVERSITY

BACHELORS IN MATERIALS SCIENCE Sep 2017 - June 2021 | Istanbul School of Engineering Minor in Physics and Math, GPA=3.96/4.00

CERTIFICATES

Coursera Deep Learning Specialization, TensorFlow: Advanced Techniques Specialization, ML Engineering for Production Specialization, For verification and complete list, please see **here**

REFERENCES

Jasper van Wezel, Associate professor, University of Amsterdam.

physics@jvanwezel.com

Durmus Ali Demir, Professor of Physics, Sabanci University

□ durmus.demir@sabanciuniv.edu