

Mert Kurttutan



github



LinkedIn



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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 Data Science Team, and Dashboard used internally by Company
- Worked on a project to create deep learning model for anomaly detection.
- Collected Resume Data and (working on) NLP solutions (e.g. Named Entity Recognition) to process resume for better candidate evaluation

SINCH | MACHINE LEARNING ENGINEER

January 2023 - Present | Remote, Internship | NLP | Large Language Models

- Prepared the fine-tuning data for LLM on internal pipeline
- Optimize pipeline using LLM to extract knowledge from doc, prompt engineering

UNIVERSITY OF AMSTERDAM | RESEARCH INTERNSHIP | NUMERICAL SIMULATION

May 2019 - August 2019 | Amsterdam, Netherlands

- Research on topological insulators and reported to Prof. van Wezel
- Co-authored publication on Phy Rev B. To see the paper, click [here](#)

LMU MUNICH | RESEARCH INTERNSHIP - HIGH PERFORMANCE COMPUTING

July 2021 - September 2021 | Online

- 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 Airflow, AWS EventBridge and ECS to automate data processing
- Implemented DNN and boosted tree to predict match results, val accuracy ~ 74%
- Deployed containerized web app for prediction using Flask and AWS ECS

OBJECT DETECTION | PYTORCH, TENSORFLOW, TFX | [github link](#)

- Implemented Pytorch and Tensorflow version of YOLOv2 architecture (darknet19) and implemented hyperparameter tuning process with Optuna and KerasTuner
- Created deployment with TFX, and Kubernetes on Google Cloud using Kubeflow

SALES PREDICTION | PYTHON | [github link](#)

- 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

TORCHVIEW | PYTHON | GITHUB ACTIONS | PYTORCH | [github link](#)

- Created fully functional and customizable python packaging for visualizing pytorch models, 10k downloads

SKILLS

PROGRAMMING

Proficient:

MATLAB • Rust • MySQL • PostgreSQL • Bash

Experienced:

Python • Julia • L^AT_EX • Go

TOOLS/PLATFORMS/OS

Git • Docker • Kubernetes • CMake • Linux • Google Cloud Platform / AWS • TensorFlow, • Pytorch • Kube-flow/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.

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Durmus Ali Demir, Professor of Physics, Sabanci University

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