CAHİD ARDA ÖZ

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EDUCATION

Boğaziçi University (GPA 3.78/4) 2019 - June 2024
Bachelor of Science in Computer Engineering
Courses on graph theory, cybersecurity, databases, operating systems, software engineering, algorithms
Graduation Project: Word Embeddings Repository for Turkish
Exchange Student at University of Twente, Netherlands Fall 2021

WORK & RESEARCH EXPERIENCE

Invent Analytics July 2022 - Present
Software Developer *Istanbul, Turkey*

- Designed and implemented **PySpark**-based modules within data processing pipelines to enhance efficiency and add new features. Notable contributions include an outlier detection module, which improved the runtime significantly, a reporting module for accuracy and prediction distribution assesment via DataDog, and a module dedicated to calculating price features for products/stores.
- Worked on developing a web application with **Streamlit**, focusing on explaining black-box machine learning model forecasts using several Python libraries for AI explainability (XAI).
- Impact: Reduced runtime of two complex algorithms **from 4 hours to 0.5 hour** on benchmark data. Integrated Dalex library to add **machine learning model interpretability** support to the MLFlow plugin of the internal forecasting library.
- Used Python, MLFlow, Streamlit, Tensorflow, Sklearn, DataDog, **Databricks, PySpark**.

Artifeye December 2021 - June 2022
Junior Machine Learning Engineer *Istanbul, Turkey*

- Worked on solving a niche **image processing** task that involved classifying objects in low contrast, microscopic images. Worked independently on researching, testing and evaluating different approaches.
- Impact: Used **MTRG Segmentation** to create an annotated image dataset. Trained deep learning models such as **CE-Net and Mask-RCNN** using this data. Used the trained models and image processing methods to create a pipeline for segmenting objects in the niche dataset.
- Used Python, **OpenCV**, Tensorflow, sklearn, **AWS EC2 and S3**.

Arute Solutions July 2021 - August 2021
Data Science Intern *Istanbul, Turkey*

- Learned about **time series forecasting**, focusing on **demand forecasting for ATM units**. Tested feature engineering, machine learning and deep learning methods. Used Keras to implement the **TabTransformer**, a deep learning architecture for modeling tabular data.
- Impact: My TabTransformer implementation was added to the company's collection of models.
- Used Python, Tensorflow, Keras, sklearn and other Python libraries.

RE4DigiTR - Boğaziçi University January 2021 - July 2021
Undergraduate Research Assistant *Istanbul, Turkey*

- Worked on developing ArTu, a web application for visualizing requirements and user story sets as graphic goal models. Used **JointJS library** to improve the graphical interface. Added new features and improved user experience of the application. Deployed the application on **Heroku**. Used Audacity, OBS Studio and OpenShot Video Editor to record and compile a demo video demonstrating the ArTu application.
- Impact: Significantly improved user experience and published a paper about the project. Dockerized the app and deployed it. App was then used in user tests.
- Used **ReactJS**, JointJS library, Flask, **Neo4j, Cypher and Heroku**.

PUBLICATIONS

- Tuğçe Günes, Cahid Arda Öz and Fatma Başak Aydemir; "ArTu: A Tool for Generating Goal Models from User Stories" 2021 IEEE 29th International Requirements Engineering Conference