

METEHAN KAYA

Machine Learning Engineer

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Summary

Skilled Machine Learning Engineer with a strong foundation in machine learning, deep learning and computer vision, expert in Python, PyTorch, TensorFlow, various machine learning libraries and frameworks. Proficient in developing and deploying sophisticated models to address complex challenges, with a proven track record of improving project outcomes. Eager to apply cutting-edge AI technologies to drive innovation.

Education

Technical University of Munich

Munich, Germany

Master of Science in Informatics, GPA: 1.9

Apr 2021 - Mar 2025 (Expected)

- **Areas:** Machine Learning and Analytics, Computer Graphics and Vision, Algorithms
- **Relevant Coursework:** Machine Learning, Machine Learning for Graphs and Sequential Data, Introduction to Deep Learning, Advanced Algorithms, Algorithmic Game Theory
- **Master Thesis:** Temporal Segmentation of Subgroup Activities in Basketball Trainings

Bilkent University

Ankara, Turkey

Bachelor of Science in Computer Engineering, GPA: 3.63/4.00

Sep 2014 - Jun 2019

- **Relevant Coursework:** Algorithms I, Algorithms II, Image Analysis, Machine Learning, Algorithms for Web-Scale Data, Automata Theory and Formal Languages, Database Systems

Experience

Machine Learning Engineer (Part-time / Working Student)

Jan 2022 - Present

Kinexon

Munich, Germany

- Trained GNN-based action recognition models on body and wholebody 2D human keypoints.
- Developed UI tools to inspect the predictions of models to eliminate the false positives and clean up the synthetic datasets.
- Contributed to implementation of models for detecting and tracking players and balls in the basketball games.

Site Reliability Engineer (Intern)

Oct 2022 - Jan 2023

Google

Dublin, Ireland

- Built a data pipeline to store more accurate Monarch time series data without facing the retention policy, helping Canary Analysis Service (CAS) to make more reliable tests.
- Implemented a visualizer tool to plot time series, observe trends, patterns and seasonality.
- Trained anomaly detection models on Monarch time series to compute verdicts of CAS evaluations, serving as an additional approach to canary testing.

Software Engineer

Jul 2019 - Mar 2021

Aselsan

Ankara, Turkey

- Contributed to electronic warfare systems that classify electronic warfare signals and match these signals to modern radars, implemented in C++.
- Implemented algorithms for radar electronic attacks and pinpointing warfare radar locations.

Software Engineer (Part-time / Working Student)

Dec 2018 - Jun 2019

Aselsan

Ankara, Turkey

- Built a Java tool for software release announcement, generating documents which mention commits, branches and tags of the Git repository.
- Retrieved repository-related data from GitLab API, manipulated documents with Apache POI, and used Selenium for web browser automation.

Software Engineer (Intern)

Aug 2018 - Sep 2018

Aselsan

Ankara, Turkey

- Implemented a Java GUI visualizing static and dynamic scheduling algorithms for periodic and aperiodic tasks in hard real time systems.
- Inspected how scan regimes are scheduled to track the signals emitted from different radars in the GUI.

Projects

Time-Dependent Vehicle Route Visualizer

2024

Full-stack Developer

JavaScript, Python, Supabase

- Deployed a web application for Time-Dependent Vehicle Routing Problem (TDVRP), visualizing optimal routes for multiple vehicles on the map, given a set of locations and dynamic duration costs.
- Fetched location and duration data from Mapbox's Matrix API, and stored in Supabase.
- Implemented a microservice for solvers such as Ant Colony Optimization, Simulated Annealing and Genetic Algorithm.

Algorithmic Problem Recommender

2022

Software Engineer

Python

- Developed a tool to recommend algorithmic problems to competitive programming enthusiasts, based on user level, problem difficulty and filters set by the user.
- Utilized odforges API to obtain user-related and problem-related data including rating, tags, statistics, etc.
- Implemented a web scraper for other platforms such as CodeChef and AtCoder.

Dressify

2019

Machine Learning Engineer, Mobile App Developer

Python, PyTorch, Kotlin, GCP

- Implemented an android mobile application suggesting clothes to purchase and users to follow where users can view clothes from various shopping platforms with the choice of their styles, rate them, and upload their own clothes.
- Built a hybrid recommendation system which is a combination of content-based and collaborative-based approaches.
- Classified clothing images based on type, color and style.
- Performed clothing boundary detection, foreground extraction and skin removal to increase classification accuracy.

Stylist

2019

Machine Learning Engineer

Python, Tensorflow, Keras

- Developed a tool for style transfer, creating a new image by merging the content of one image with the style of another.
- Extracted low-level and high-level features of the source images using a pre-trained VGG16 model.
- Implemented Gatsy's method and Johnson's method to combine images and L-BFGS as an optimizer.

Recommma

2018

Software Engineer

Python, PyTorch

- Built a recommendation system suggesting movies based on ratings and scripts.
- Extracted features of scripts collected from IMDB Movie Scripts and MovieLens 20M Dataset.
- Applied various methods such as Jaccard Similarity on genres, Cosine Similarity on TF-IDF, LSH and Word2Vec to calculate similarities of scripts.
- Utilized Gradient Descent Algorithm as a validation method.

Skills

Areas: Machine Learning, Computer Vision, Data Engineering, Full-stack Development, Algorithms

Programming Languages: C/C++, Python, Java, Go

Machine Learning: PyTorch, TensorFlow, Keras, Scikit-learn

Web: HTML, CSS, JavaScript, TypeScript, React, Angular, VueJS, NodeJS, ExpressJS

Database: MySQL, PostgreSQL, MongoDB

Data Engineering: Airflow, Kafka, Hadoop, Spark

Miscellaneous: Git, Docker, Kubernetes

Honors & Awards

IEEEExtreme 12.0: As a team of two students, ranked 1st in Turkey, 9th out of over 4000 teams globally.

2018

Nationwide University Entrance Exam: Ranked in top 300 among 2.1 million students in Turkey.

2014

TÜBİTAK National Olympiads in Informatics: Awarded bronze medals.

2011-2013