Mert Can Demir

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Education

Hacettepe University, Computer Engineering Department Ankara, Turkey
Bachelor of Science in Computer Engineering (GPA 3.37/4.0) **2017 - 2022**

• **Relevant Coursework:** Data Structures, Algorithms, Design Patterns, Basic Linear Algebra, Statistics, Data Management, Fundamentals of Machine Learning, Computer Networks, Fundamentals of Computer Vision, Data Intensive Applications, Automata Theory and Formal Languages, Advanced Computer Architectures

Projects

fleam *(JavaScript, Java, Python)* **10/2021 - 05/2022 (8 months)**

• The project is devised as a movie/series streaming platform like Netflix and Disney+.
• Contributed to the platform's front end with React.
• Created the recommendation service with recompy, FastAPI and Docker Compose.
• Created a logo and chose a color palette for the website.
• The source code of the project can be accessed from here.

HitHub *(Python)* **03/2022 - 06/2021 (4 months)**

• The project helps to decide whether songs that are already on Spotify are going to be a hit.
• Led the main development of the project and created a series of models to experiment using machine learning algorithms such as Logistic Regression, SVM, KNN, and Artificial Neural Network.
• Proposed a solution which works with an accuracy of 84%.
• The reports and the source code of the project can be accessed here.

Experience

ZEG Teknoloji Ankara, Turkey
Machine Learning Engineer **02/2023 - Present**

• Architect/deploy containerized ML backends using FastAPI and Docker, integrating Triton Inference Server to enable scalable ONNX/TensorRT inference and concurrent detection across diverse data sources.
• Develop and optimize computer vision models for real-time, high-accuracy inferencing.
• Engineer end-to-end machine learning solutions by building cohesive frontend and backend systems using Ruby on Rails and Tailwind CSS.

Brandefense Ankara, Turkey
Machine Learning Engineer **07/2021 - 08/2022 (1 year 2 months)**

• Led the design of microservice applications using machine learning for phishing detection.
• Created multithreaded applications for efficient data gathering required for model training.
• Worked with Python, FastAPI, Docker, and implemented CI/CD for application deployment.
• Developed machine learning models using TensorFlow and PyTorch while conducting research to eliminate biases in outcomes.
• Ensured services were comprehensively documented using Sphinx and thoroughly tested with a coverage of 95% using Pytest.

JotForm Ankara, Turkey
Data Scientist, Intern **08/2020 - 10/2020 (3 months)**

- Worked with the Data team to develop a spam detection project, utilizing neural networks with TensorFlow.
- Designed a machine learning model that identified spam forms in six languages with 94% accuracy, using character N-grams and Universal Sentence Encoder.
- Collaborated on the front-end development, employing React for the project presentation.

Hacettepe University Dist. Edu. Appl. and Res. Ctr. Ankara, Turkey
Junior Data Scientist, Part-time **10/2019 - 05/2020 (8 months)**

- Contributed to the implementation of text-to-speech and speech-to-text systems.

Others

Deep Learning Study Group: Completed DeepLearning.ai Study Group #5, interacting with other participants, community members, and guests to improve knowledge and application of deep learning. Access the report here.

Hacettepe University Free Software Society: Co-founder and public relations officer for 2 years.

Python Tutor: Served as an instructor in an 8-week Python 3 course organized by Hacettepe Free Software Society and HUBITO (Hacettepe University Biology Society). Access the lecture recordings (in Turkish) here.

ACM Hacettepe Mobile App: Assisted in the development and maintenance of the ACM Hacettepe Student Chapter's cross-platform mobile app written in Flutter. The app can be found here.

auto-cpufreq: Contributed to a Linux CPU speed and power optimization application by implementing a mechanism to adjust EPP values based on system load.

drop-cache-if-idle: Authored a script to mitigate RAM usage issue on WSL2.

ultralytics: Improved ultralytics project, by introducing a feature *split*, enabling users to test fine-tuned models with their own datasets, a functionality not previously available.

Raycast: Added AI agent capabilities on Apple Music and Kill Process extensions. Furthermore, created AI-native extension Git Assistant, that enhances your Git workflow with AI-powered features and convenient tools.

Languages

Turkish: Native
English: Proficient, *EF SET English Certificate 69/100 (C1 Advanced):* https://www.efset.org/cert/jk7dRN

Technical Skills

Languages: Python, Java, C, TypeScript, Dart, PostgreSQL, Ruby
Libraries & Frameworks: React, Flutter, Ruby on Rails, FastAPI, Playwright, Pytest, NumPy, Pandas, Matplotlib, Seaborn, TensorFlow, PyTorch, Triton Inference Server
Technologies: Docker, Docker Compose, Git, CI/CD
Foundations: Artificial Intelligence (AI), Data Science, Machine Learning, Deep Learning, NLP, Computer Vision, Recommendation Systems, Phishing Detection, Feature Engineering, Unit Testing, Microservices, Statistical Analysis