Muhammed Rüşen Birben

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Education

Bachelors Degree on Electronics and Communication Engineering 09/2020 – 08/2022
Istanbul Technical University Istanbul, Turkey
Transferred to the AI & Data Engineering Program in 2022

Bachelors Degree on AI and Data Engineering 09/2022 – 07/2025
Istanbul Technical University İstanbul, Türkiye
GPA: 3.61

Professional Experience

AIOps Research Intern
Havelsan
08/2024 – 09/2024 | Istanbul, Türkiye

Conducted researches for an AIOps project that uses software log data for predictive maintenance, then use the found insights to generate a demo on HDFS logs.

NLP Research Intern
ITU NLP Lab.
07/2024 – 08/2024 | Istanbul, Türkiye

Conducted researches on utilizing LLMs for financial applications. Researches covered: Financial forecasting, sentiment analysis, tool using, financial reasoning, applications of RAG on financial LLMs

Junior AI Engineer
CyberQuote
03/2025 – 07/2025 | Istanbul, Türkiye

I've worked as an artificial intelligence engineer for the past few months at CyberQuote, which is a wholly owned subsidiary of Phillip Capital. My work covers automations where LLMs are a part and agentic use of LLMs inside the company and in their websites.

Projects

To-AI-or-Not-to-AI
GPT-Detector
03/2023 – 06/2023

This project develops an ensemble method to detect AI-generated text, particularly content similar to ChatGPT's output. It uses three fine-tuned AI models to analyze and classify text as either AI-generated or human-written. The system addresses concerns about academic integrity and misinformation by providing a tool to identify AI-authored content. Using a diverse dataset, the project combines multiple models' predictions for enhanced accuracy. The result is a user-friendly tool accessible via Jupyter notebook or online on HuggingFace.
[Access Demo]

Biting-The-Bytes
Biting The Bytes: Transformers For Diacritic Restoration
03/2024 – 06/2024

This project aimed to improve Turkish text by automatically adding missing accent marks and special characters, which are crucial for proper pronunciation and meaning in the Turkish language. We used T5, an LLM that Google developed. The result is a system that can take plain Turkish text without proper accents and automatically restore them, enhancing readability and accuracy for Turkish speakers.
[Access Demo]

Languages

English | Turkish

Courses

Deep Learning

Deeplearning.ai

An extensive series of courses, a specialization, given by Andrew Ng on Deep Learning. Courses cover variety of deep learning tasks such as Sequence Models, CNNs, NN and DL basics, Structuring ML Projects, Improving Deep NNs

AWS Cloud Technical Essentials

AWS Coursera

Completed AWS Cloud Technical Essentials course, mastering core AWS concepts, security practices, and key services including EC2, Lambda, ECS, RDS, DynamoDB, and S3. Gained practical knowledge in cloud computing fundamentals and AWS implementation.

Interests

☕ Coffee

- I LOVE a good cup **specialty coffee**, I have my setup for V60 and Aeropress coffee.

📚 Books

- I love reading books, philosopy and AI / CS related topics in particular.

🇯🇵 Anime / Manga

- I love watching anime and reading manga.

AIZheimer

Machine Un-Learning on Stable Diffusion

03/2024 – 06/2024

This project aims to selectively remove specific concepts from an AI image generation model called Stable Diffusion 2.1 while keeping its other capabilities intact. The goal is to make the AI unable to generate images of particular target concepts when prompted while still being able to produce high-quality images of everything else it has learned. This selective "forgetting" could be useful for various applications, such as content moderation or customizing the AI's output for specific use cases.

Anime Recommender

09/2022 – 02/2023

This project created a personalized anime recommendation system by combining two approaches: analyzing similar users' preferences and considering anime characteristics. Using a large dataset of user ratings and anime information, the system learns patterns to suggest shows users might enjoy.

Mobile Feasible Virtual Try On

03/2024 – 06/2024

We've enhanced a virtual try-on system, enabling users to visualize clothing on themselves without physical wear. Our focus was on optimizing the model for mobile devices by reducing its memory footprint, making realistic virtual fittings more accessible and efficient for on-the-go fashion exploration.

Tobor

Amazon Warehouse Robot

09/2024 – 01/2025

Developed an autonomous warehouse robot system simulating Amazon's logistics operations, focusing on efficient navigation and obstacle avoidance. Designed and implemented advanced pathfinding, obstacle avoidance, and task scheduling algorithms using Python and robotics simulation frameworks. The robot is able to see its enviroment and detect human and cargo boxes with a custom trained YOLO model. [*Access Video*]