Alperen Çelik

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Education

Afyon Kocatepe University   Sep. 2018 – Jan 2024
Bachelor of Mechatronic Engineering   *3.1 gpa*

Relevant Coursework

- Artificial Intelligence
- Computer Vision
- Robotics
- Deep Learning
- Machine Learning
- NLP
- Cloud Systems
- Database Management

Experience

Novelty AI   Sep 2023 – Present
AI/ML Engineer   *Gebze, Türkiye*

- Using advanced Computer Vision and deep learning techniques, I have developed a system that develops billboards that provide personalized advertising by analyzing the characteristics of customers who come to stores in shopping malls. This system works 15% more successfully than the foreign product previously used.

- Developed C# software using profile sensors from Sick and Venglor to control parts production for a Japan-based factory. With this software, we used advanced image processing techniques to process and analyze point cloud data to accurately monitor the production process and detect defective parts, increasing the success rate of production to 95%."

- I developed identification system software for a bank using deep learning techniques. This system aimed to increase security by optimizing customer authentication processes and was successfully implemented.

- At a defense industry company, I led the installation of ABB industrial robots on a production line. Leveraging advanced Computer Vision techniques, I developed a system that commands robots to perform tasks traditionally performed by human operators. This project used Artificial Intelligence and robotics to deliver complex automation solutions, greatly improving operational efficiency.

- For one of the leading telecom companies in Turkey, I developed software that enables live broadcasting and OTT automation with Suitest software using Python and image processing techniques.

- For a beverage company, I was part of the team that developed an artificial intelligence application that checks the recognition and accuracy of product labels on the production line.

University of Malta   Jul 2023 – Aug 2023 (3 mos)
AI Researcher   *Malta*

- I worked with a team developing a semi-autonomous drone to detect waste plastic bottles on beaches using artificial intelligence. I implemented computer vision algorithms such as Detectron2 in Python for object detection and used C++ for real-time integration with the drone's control systems, enabling efficient environmental scanning and cleaning.

DHMI Erzurum Airport   Jul 2022 – Aug 2022 (2 mos)
Mechatronics Engineer Intern   *Erzurum, Türkiye*

- I interned in areas such as sensors, electronic cards, and x-ray devices within terminal electronics. The most significant gain from this internship was learning corporate work discipline and internal relationship techniques..

Ecodation   Jun 2021 – Jul 2021 (2 mos)
Python Developer Intern   *Istanbul, Türkiye*

- I worked on projects like a navigation and customer tracking system for cargo delivery. These projects involved developing and integrating Python APIs and Flask to streamline data communication and using web scraping techniques to gather and analyze relevant information from various sources. My main achievement from these projects was learning to work effectively as a team, coordinating with colleagues to tackle complex challenges and deliver cohesive solutions.

Projects

AI-Driven Cryptocurrency Trading Bot | *Python, LLM, LangChain, AI Agents*
- Developed a cryptocurrency trading bot utilizing Large Language Models (LLMs) and LangChain to enhance trading decisions. The bot integrates with the Binance API, executing trades based on real-time market data and technical analysis.
- The LangChain framework and AI agents are used to analyze market trends by combining historical data with current information. This setup enables the bot to perform detailed technical analysis and generate actionable insights for trading.
- AI agents process news and social media to assess market sentiment. The bot adjusts its trading strategies based on sentiment and technical indicators, aiming to maximize profitability and minimize risk.
- Python was used for developing the core functionalities and integrating the LangChain system, ensuring the bot's efficiency and effectiveness in the volatile cryptocurrency market. The bot also adapts and improves its strategies over time through continuous learning.

Personalized Product Analysis with AI | *Python, .Net, Huawei Cloud*
- Our application is designed to help users make informed and healthy choices when purchasing products. By uploading a photo of the product's ingredients, the user can get a detailed analysis of how suitable and beneficial the product is for them. The application scans the content of the product with artificial intelligence systems and identifies substances that may cause allergies or adverse effects that the user has previously identified. It provides the user with a summary of the product's content and the presence or absence of the substances they have identified. Thanks to this application, we came 3rd in BTk Academy and Huawei Coding Marathon

Multi View Breast Cancer Classification App | *Python, PyQt5, Deep learning*
- Within the scope of Teknofest artificial intelligence in health competition, the team I captained by developing a multi-model deep learning network for the diagnosis of breast cancers succeeded in becoming a finalist.

Optical Character Recognition with Streamlit | *Python, Streamlit, Huggingface*
- OCR (Optical Character Recognition) technology has transformed how we interact with textual content in the digital realm. By converting images, scanned documents, and other media into editable and searchable text, OCR enables us to extract valuable information from diverse sources.

Technical Skills

Languages: Python, C/ C++, Matlab, SQL, RobotStudio, Ros, PLC
Developer Tools: Tensorflow, Pytorch, Google Cloud Platform, Huawei Cloud
Technologies/Frameworks: Linux, GitHub, HuggingFace, Kaggle, Selenium, Docker

Certificates

Teknofest Finalist Certificate: T3 Foundation
BTK Academy And Huawei Coding Marathon : Certificate of Competitio Winning (3rd)
EITCA Artificial Intelligence Academy 12 Certificates : European Union
TensorFlow: Advanced Techniques Specialization : Coursera
Google Cloud Expertise : Google
AI Expert Training Program 6 months : Republic Of Türkiye Ministry of Industry and Technology
Oxford University English B2 Certification : ClubClass Language School MALTA
Introduction to Machine Learning in Production : Coursera
Hands-on ROS Training with Python : Udemy
Image processing with Deep learning : Udemy

Honors and Open Source Pojects

-Teknofest Healthcare Competition Finalist

-BTK Academy and Huawei Coder Marathon Third Place

-Kaggle Master https://www.kaggle.com/alperenclk

Some Articles

https://medium.com/@alperenclk/exploring-optical-character-recognition-ocr-with-streamlit-and-doctr-00e95ae36e4e

https://medium.com/@alperenclk/automating-telegram-game-bot-clicker-with-python-step-by-step-guide-1b9206188d06