Pelinsu Acar

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Education

University of Bologna Bologna, Italy
Master of Science in Artificial Intelligence; GPA: 102/110 *2022 – 2024*

Bilkent University Ankara, Turkey
Bachelor of Science in Electrical and Electronics Engineering; GPA: 3.52/4.0 *2016 – 2021*

Experience

CNH INDUSTRIAL BELGIUM NV Zedelgem, Belgium
Master's Thesis Student *March 2024 – December 2024*

- Conducted research on state-of-the-art Zero-Shot and Open-Vocabulary Object Detection models (OWLv2 and YOLO-World) using different query embedding techniques (CLIP, DINOv2) to asses kernel detection performance for real-time grain loss assessment.

MLPS AD Bulgaria (Remote)
Cumputer Vision Intern *August 2023 – September 2023*

- Developed a license plate recognition system using OpenCV and Tesseract OCR. Enhanced car detection with SSD MobileNet, Grad-CAM, and a color detection pipeline using K-Means and RGB matching.

NTT DATA Business Solutions İstanbul, Turkey
Junior Big Data Engineer *December 2021 – August 2022*

- Worked as a data engineering consultant in ZF Global's DMP project, designing data transformations with PySpark and SQL on Databricks/Synapse.
- Integrated manufacturing execution systems into a unified data model for an Angular + Power BI OEE dashboard.
- Ensured stability through CI/CD, bug fixes, and performance optimizations while implementing key data engineering principles like row-level security, multi-hop architecture, and fault-tolerant ingestion.

Significant Projects

One/Zero Shot Vehicle Detection on Satellite Images *University of Bologna*
Machine Learning for Computer Vision Term Project *2024*

- Implemented and evaluated two open-vocabulary object detection models, OWLv2 and YOLO-WORLD, for detecting vehicle classes in satellite images using both text and image queries.

Emotion Discovery and Reasoning its Flip in Conversation *University of Bologna*
Natural Language Processing Term Project *2024*

- Developed a BERT-based system to identify emotions and detect emotional shifts in conversational dialogues, leveraging specialized classification heads for trigger and emotion detection.

Anti-Covid19 Systems *Bilkent University*
Electrical and Electronics Engineering Design II Term Project *2021*

- Developed an IoT application using Arduino UNO and Raspberry Pi4 to monitor face masks and body temperature. Implemented facial recognition with OpenCV to detect unmasked faces, displayed data on an Android app, and sent user notifications.

Tameable Snake *Bilkent University*
Introduction to Machine Learning Term Project *2020*

- Implemented a Deep Q-Network (DQN) using TensorFlow to train a Snake game agent with a reward-based state mechanism.

Languages

English *Level: Advanced*
Turkish *Level: Native*

Skills

Programming Languages: Python, Matlab, SQL, VHDL, Java
Databases: PostgreSQL, SQL Server
Libraries & Frameworks: NumPy, Pandas, OpenCV, NLTK, scikit-learn, HuggingFace, TensorFlow, PyTorch
Tools & Technologies: Git, Docker, Anaconda, Azure Databricks, Azure Synapse, Simulink, Vivado

Licenses & Certifications

- Microsoft Certified: Azure Data Fundamentals
- IELTS (Grade: 7/9)
- GRE General Test (Quantitative Reasoning: 167/170)
- Associated Board of the Royal Schools of Music (ABRSM) Certificates (Grade 5 Music Theory & Piano, passed with distinction)

Honors & Rewards

- Granted a scholarship for my master's degree at the University of Bologna by the Ministry of Foreign Affairs and International Cooperation (MAECI), 2022 – 2023.
- Bilkent University High Honor Certificates, 2016-2017 Spring, 2017-2018 Fall, 2020-2021 Fall, 2020-2021 Spring.
- Placed 2980th in the National University Entrance Exam among over 2.2 million students and granted %50 scholarship for the undergraduate program by Bilkent University, 2016.