

# Umut Onur Yaşar

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Applied AI Researcher

## Summary

Applied AI Researcher with a background in Electrical and Electronics Engineering. Specializing in Deep Learning and Computer Vision — model compression, knowledge distillation, and object detection. Focused on bridging research and deployment reality. Stack: PyTorch · CUDA · OpenCV · Python. Open to collaboration on ambitious CV or applied ML problems.

## Education

2026 **CS229: Machine Learning (Stanford Online)**, *Stanford University*  
Final Project: Knowledge distillation with ablation studies on CIFAR-10.

2011–2020 **B.Sc. in Electrical and Electronics Engineering**, *Abant İzzet Baysal University*, Bolu, Turkey

## Experience

May 2024 – **AI Trainer**, *Outlier*, Remote

- Feb 2025 ○ Fine-tuned large language models using Reinforcement Learning with Human Feedback (RLHF).
- Contributed to reward modeling, prompt optimization, and high-quality data generation.
- Collaborated with engineering teams to improve model safety and usability.

Aug 2015 – **Computer Vision Intern**, *HAVELSAN*, Ankara, Turkey

- Sep 2015 ○ Developed a flight simulation interface using Python.
- Applied OpenCV in computer vision projects.
- Conducted research on the Robot Operating System (ROS).

Jun 2014 – **Avionics Intern**, *Turkish Aerospace Industries (TAI)*, Ankara, Turkey

- Jul 2014 ○ Developed an image recognition system in MATLAB for identifying helicopter landing zones.
- Created a 3D model of helicopter electrical cable placement using CATIA.
- Contributed to avionics harness design process.

## Projects

2026 **Object Detection with RT-DETR on COCO**

Explored transformer-based real-time detection. Analyzed speed-accuracy trade-offs under hardware constraints (RTX 3050, 16 GB RAM).

*PyTorch · COCO · RT-DETR*

<https://github.com/umutonuryasar/rt-detr-kd>

2026 **Knowledge Distillation on CIFAR-10**

Systematic ablation study on teacher-student architectures. Investigated temperature scaling, intermediate feature alignment, and loss weighting strategies.

*PyTorch · CIFAR-10*

[github.com/umutonuryasar/kd-cifar10](https://github.com/umutonuryasar/kd-cifar10)

2023 **Real-Time Object Detection with YOLOv8**

Real-time detection pipeline using YOLOv8n and OpenCV. Bounding box rendering with class labels and confidence scores on live video streams.

*Python · Ultralytics · OpenCV*

[github.com/umutonuryasar/Real-Time-Object-Detection](https://github.com/umutonuryasar/Real-Time-Object-Detection)

## Skills

Frameworks PyTorch, OpenCV, Ultralytics, NumPy, scikit-learn

Languages Python, MATLAB, C/C++

Tools CUDA, Git, Linux

Domains Deep Learning, Computer Vision, Knowledge Distillation, Object Detection, RLHF  
Spoken Turkish (Native), English (Full Professional)

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## Certifications

IBM AI Engineering Professional Certificate  
IBM Applied AI  
Google Integrate with Machine Learning APIs  
Cloud  
Google Perform Foundational Data, ML, and AI Tasks  
Cloud  
Google Explore ML Models with Explainable AI  
Cloud  
Coursera Machine Learning