

Onat Özdemir

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EDUCATION

- **The University of Edinburgh** Edinburgh, UK
Doctor of Philosophy in Informatics Sept 2025 - Present
 - Researching representation learning and vision-language models (VLMs), with direct applications in multimodal deepfake detection.
- **Middle East Technical University** Ankara, TR
Master of Science in Computer Engineering Sept 2022 - Aug 2025
 - **Thesis:** Interpretable Zero-shot Classification with Concept Bottleneck Models
 - **GPA:** 3.93/4.0
- **Middle East Technical University** Ankara, TR
Bachelor of Science in Computer Engineering Aug 2017 - July 2022
 - **GPA:** 3.86/4.0 (Ranked 8th/261)

EXPERIENCE

- **RadiusAI** Bellevue, WA
Applied Scientist June 2022 - Aug 2025
 - Built a scalable VLM-based reverse image search system (SigLIP + FAISS), expanding product coverage from 2K to 7.5K items while maintaining 80% top-1 accuracy.
 - Developed a multi-camera object-correspondence method achieving 99.3% match accuracy across real-world retail camera feeds; deployed in live environments.
 - Built a camera movement detection system combining pixel correlation and LoFTR to identify positional camera shifts invalidating calibration, triggering automatic staff alerts and recalibration.
 - Designed an attention-based multiview object classification system merging embeddings across camera views before classification, achieving +15% accuracy over naive voting baseline.
 - Designed and implemented a two-stage prototypical learning pipeline; +8% OOD detection accuracy.
- **The Cornell, Maryland, and Max Planck Pre-Doctoral Research School** Saarbrücken, DE
Attendee Aug 2021
 - Selected as one of 90 participants worldwide for lectures on cutting-edge topics, including wearable computing, machine learning, and robotics.
- **Koç University** Istanbul, TR
Research Intern June 2021 - Aug 2021
 - Researched GAN-based semantic image editing under the supervision of Prof. Aykut Erdem and Prof. Erkut Erdem.
- **METU Data Mining Research Group** Ankara, TR
Undergraduate Research Assistant Dec 2020 - June 2021
 - Developed the CS-Trust2Vec model, a context-sensitive trust network embedding approach outperforming Node2Vec and DeepWalk on link prediction accuracy.
- **METU Data Mining Research Group** Ankara, TR
Research Intern July 2020 - Oct 2020
 - Implemented a trust-based recommendation system and tested its performance on widely used datasets.

PUBLICATIONS

- **Explaining CLIP Zero-shot Predictions Through Concepts (CVPR 2026)** [🔗](#)
[Onat Özdemir](#), Anders Christensen, Stephan Alaniz, Zeynep Akata, Emre Akbaş
- **Interpretable Zero-shot Classification with Concept Bottleneck Models (MSc Thesis)** [🔗](#)
[Onat Özdemir](#)
- **A Systematic Comparison of Training Objectives for Out-of-Distribution Detection in Image Classification** [🔗](#)
Furkan Genç, [Onat Özdemir](#), Emre Akbaş

SKILLS

ML Frameworks

Vision & Language

Tools

Languages

PyTorch · Hugging Face · FAISS · OpenCV

SigLIP · CLIP · ViT · Concept Bottleneck Models

Docker · Git · CVAT · Weights & Biases

Python · C/C++ · SQL