Adnan Harun Dogan

| adnanharundogan@gmail.com | LinkedIn | GitHub | Google Scholar

Education

Master of Science in Computer Engineering — 2022 – 10 Jan 2025
Middle East Technical University (METU) — *Ankara, Turkey*

Bachelor of Science in Computer Engineering — 2018 – 17 Jul 2022
Middle East Technical University (METU) — *Ankara, Turkey*

Experience

Research Intern — Dec 2024 – Mar 2025
Sensing, Interaction, & Perception Laboratory (SIPLab), ETH Zürich — *Zürich, Switzerland*

- Developed EEG-based cybersickness detection using multitaper spectrum estimation in VR
- Achieved 30% improvement over baselines with novel deep learning architectures
- Published at IEEE/ICRA 2026

Graduate Research Assistant — Feb 2022 – Present
Image Processing and Pattern Recognition Laboratory (ImageLab), METU — *Ankara, Turkey*

- Designed bucketed ranking loss with Sinkhorn-Knopp algorithm for DETR object detection architecture
- Improved end-to-end object detection via optimal transport-based loss formulations

Undergraduate Research Intern — Jun 2021 – Sep 2021
Cyber-Physical Systems Laboratory, University of California, Irvine — *Irvine, California, USA*

- Built multi-modal deep learning system for cardiac and sleep abnormality detection
- Designed beat-by-beat arrhythmia classification integrating time-series and spectral features
- Published at Computing in Cardiology (CinC) 2021

Publications

Dogan, A. H., Demirel, B. U., Holz, C. (2026). Frequency-Weighted Neural Kalman Filters. ***ICRA 2026***. [GitHub]

Demirel, B. U., **Dogan, A. H.**, Rossie, J., Möbus M., Holz, C. (2025). Beyond subjectivity: Continuous cybersickness detection using eeg-based multitaper spectrum estimation. ***IEEE/TVCG 2025***. [DOI — GitHub]

Yavuz, F., Cam B.C., **Dogan, A. H.**, Oksuz, K., Kalkan, S., Akbas, E. (2024). Bucketed Ranking Loss for Efficient Ranking-based Training of Object Detectors. ***ECCV 2024***. [ECVA — DOI — GitHub]

Amin M. A., **Dogan, A. H.**, Kuru E. S., Sever Y., Angin P. (2024). Misuse Detection and Response for Orchestrated Microservices Based Software. ***AINA 2024***. [KAGGLE — PAPER]

Karagoz, P., Cekinel, R. F., **Dogan, A. H.**, Oktay, B., Ozturk, A. U., Tonay, S. T., Tunel, B. M. (2024). Enhancing Underground Built Heritage Analysis with Text Mining: A Case Study on Cappadocia. ***Book Chapter 2024***. [PAPER]

Sever Y., **Dogan, A. H.** (2023). A Kubernetes dataset for misuse detection. ***ITU Journal 2023***. [DOI — Paper — GitHub]

Sever, Y., Ekinci, G., **Dogan, A. H.**, Alparslan, B., Gurbuz, A. S., Jabrayilov, V., Angin, P. (Sep 2022). An Empirical Analysis of IDS Approaches in Container Security. ***IEEE/SRMC 2022***. [DOI]

Demirel, B. U., **Dogan, A. H.**, Al-Faruque, M. A. (2021). Two Might Do: A Beat-by-Beat Classification of Cardiac Abnormalities using Deep Learning and Domain-Specific Features. ***CinC 2021***. [GitHub — PAPER — DOI]

Buyukbas, E. B., **Dogan, A. H.**, Ozturk, A. U., Karagoz, P. (2021). Explainability in Irony Detection. ***DaWaK 2021***. [PAPER]

Dogan, A. H., Dogan, A. (Jun 2021). An Assembled Deep Learning Approach for Flow Field Prediction. [PAPER]

Honors & Awards

TUBITAK 2247 C STAR Scholarship — 2022-2023
The Scientific and Technological Research Institution of Turkey (TÜBİTAK)

Best Paper Award — September 2022
IEEE/SRMC'22

TUBITAK 2247 C STAR Scholarship — 2021-2022
The Scientific and Technological Research Institution of Turkey (TÜBİTAK)

TUBITAK 2247 C STAR Scholarship — 2020-2021
The Scientific and Technological Research Institution of Turkey (TÜBİTAK)

Technical Skills

Skills: Python/PyTorch, Variational and Generative Modeling, Computer Vision, Statistical Machine Learning, Combinatorial Optimization, Reinforcement Learning