Selahaddin HONİ

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ABOUT

I have a strong passion for machine learning and its innovative applications in IoT and social computing. My fascination lies in how machine learning can empower IoT systems to interact with humans and the environment.

EDUCATION

KAIST — Korea Advanced Institute of Science and Technology Daejeon, Korea
Joint Master & Ph.D. • School of Computing 2024
Advisor: Prof. Junehwa Song
• I was a visiting researcher in Vision and Learning Lab supervised by Prof. Seunghoon Hong. 2023
• I completed several courses on AI and its applications as an exchange student. 2022

Istanbul Technical University Istanbul, Turkiye
Bachelor • Electronics & Communications Engineering • GPA: 3.54 / 4.00 2022
Advisor: Prof. Bilge Günsel **Thesis:** Long-term person tracking via deep learning

EXPERIENCE

Graduate Student Researcher in KAIST Daejeon, Korea
NC Laboratory April, 2024 ~
I research on IoT, social computing and deep learning.

Visiting Student Researcher in KAIST Daejeon, Korea
Vision and Learning Laboratory July, 2023 ~ December, 2023
Visual Token Matching (VTM) is a general-purpose few-shot learner for arbitrary visual dense prediction tasks, as proposed by a lab mate in an outstanding paper in ICLR'23. However, VTM cannot handle temporal information, which hinders its performance in video domains. In my internship, I enhanced VTM's generalizability by incorporating time attention into its framework. Empirical results show that the method surpasses the baseline VTM when a very limited support set is available. Specifically, the method achieves 8.89% and 4.37% higher accuracy than the baseline in 1-shot and 2-shot scenarios, respectively, on the DAVIS2016 video segmentation dataset.

Undergraduate Researcher in Istanbul Technical University Istanbul, Turkiye
Multimedia Signal Processing and Pattern Recognition Research Group August, 2021 ~ March, 2022
We created a novel inference architecture that leverages re-identification features for data association in visual object tracking for long-term videos. Our tracker provisionally matched the state-of-the-art performance within the scope of person tracking in the Visual Object Tracking – Long Term 2021 benchmark.

Intern in TUBITAK BILGEM (Sci. & Tech. Research Council of Turkiye) Kocaeli, Turkiye
Communication & Signal Processing Lab. July ~ September, 2020
Our team created an end-to-end communication channel for a control model using GNU Radio. We built physical, data link, network, and transport layers and applied basic modulations on LimeSDR hardware.

Intern in HAVELSAN Inc. Ankara, Turkiye
Big Data & Artificial Intelligence Section May ~ June, 2020
I led a visual gesture recognition project, created a custom dataset and a real-time app, and won an innovation award.

Intern in BAYKAR Technologies Istanbul, Turkiye
Control Simulation & Embedded Software Dept. June ~ September, 2019
Our team created a web platform for converting embedded C code to C# code.