# Selahaddin HONI

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#### **ABOUT**

Introduces himself as a researcher in pattern recognition and machine intelligence division. Currently, he interested in computer vision and studies on real time object tracking via particle filters combined with deep detection networks as senior thesis work.

#### **EDUCATION**

#### KAIST — Korea Advanced Institute of Science and Technology

Master • Exchange Student

Daejeon, Korea, Republic of (Postponed-to) Spring, 2022 ~ Fall, 2022

**Istanbul Technical University** 

Bachelor • Electronics & Communication Engineering • GPA: 3.52 / 4.00

**Thesis:** Bayesian filtering for real-time object tracking (in progress)

Thesis Advisor: Prof. Dr. Bilge Gunsel

Taken Graduate Courses: TEL520 Digital Video Processing

#### **EXPERIENCE**

#### Intern in TUBITAK BILGEM

## Communication & Signal Processing Lab.

Kocaeli, Turkey 27 days in Summer, 2020

Istanbul, Turkey

Spring, 2017 ~ Present

Designed an end-to-end communication channel for servo control. Basic modulation methods were implemented on LimeSDR hardware over GNU Radio environment. Physical, data link, network and transport layers were constructed for a simplified control model. At the end, designed communication system was demonstrated to the president of the institute in the final presentation.

#### Intern in HAVELSAN Inc.

Ankara, Turkey

## Big Data & Artificial Intelligence Section

20 days in Summer, 2020

Developed a deep learning project for classification of static hand figures. The dataset was generated via custom application. Also, the project was visualized with a real-time interface. Then, it was evolved into a touchless design for automats with a motivation of innovative ideas competition; awarded with 3<sup>rd</sup> prize after presented to the management team of the company.

#### Intern in BAYKAR Technologies

#### Control Simulation & Embedded Software Dept.

Istanbul, Turkey 60 days in Summer, 2019

Coded a platform for translation between embedded C and C# languages. The project having web interface has deployed on the department server to serve to colleagues.

#### **HONORS & AWARDS**

## Innovative Idea & Design Award, #3rd

HAVELSAN Internship Project Contest, 2020

A touchless design for automats thanks to computer vision Fighting Drones, Multirotor Category, Mention Award, #1<sup>st</sup>

Communications of Drone & Ground Control Station & Main Server

TEKNOFEST, 2019

## SIDE PROJECTS

#### **Digital Video Processing**

Check out GitHub page for details.

Motion estimation over block matching & optical flow algorithms and extraction of 2D affine motion model parameters. Review of feature pyramid networks for object detection & tracking via color-based particle filter.

# **Introduction to Computer Vision**

Practice on using OpenCV for classification, detection, segmentation and tracking.

## **Voice Conversion by using CycleGAN**

It is aimed to transfer the trained voice style of a famous person to given input voice.