



# Hüseyin Avni YASAR

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Çankaya, 06810, ANKARA, Turkey

## ● EDUCATION AND TRAINING

09/2019 – 06/2022 – Ankara, Turkey

**MASTER OF SCIENCE (M.S.), APPLIED MATHEMATICS** – Middle East Technical University

✚ The aim of this thesis is to use multi-fidelity **neural network** models to obtain similar accuracy to the High-Fidelity Model but at much less computational cost, greatly improving the efficiency of the reliability analysis procedures and using this model to make the design optimization of the panel.

✚ Developing **machine-learning**-based solutions to augment physical simulations

*Supervisor:* Assoc. Prof. Dr. Ercan Gürses (METU)

3.30/4.00 | Thesis: Development of Multi-Fidelity Trained ANN for Optimization of Stiffened Structures

Courses Taken:

- Deep Learning
- Sparse Matrix Computations
- Numerical Optimization

09/2013 – 06/2018 – Ankara, Turkey

**BACHELOR OF SCIENCE (B.S.), MECHANICAL ENGINEERING** – Middle East Technical University

Engineering thinking, CAD-CAE programs for mechanical design & simulations, MATLAB-Python for developing algorithms

2.80/4.00

## ● PROJECTS

04/2021 – 05/2021

**A Sequence Modeling Pipeline with PyTorch for Weather Prediction**

Demonstrating a pipeline for training a recurrent neural network

03/2021 – 07/2021

**Momentum Batch Normalization for Deep Learning with Small Batch Size**

- ✚ Reproducing a paper without a code implementation.
- ✚ Implementing the models described in the paper and obtain the acceptable results
- ✚ Applying Momentum Batch Normalization method to image classification tasks
- ✚ Conducting experiments on CIFAR10 and CIFAR100 datasets

## ● WORK EXPERIENCE

08/2018 – CURRENT – ANKARA, Turkey

**DESIGN ENGINEER** – ROKETSAN

- Development of **design automation** process for commonly used mechanical components
- Designing **optimization algorithms** and functional models
- Presentation, justification, and reporting of design studies
- Participating in research and development projects

Programs used:

- ✚ **MATLAB and Python:** Optimization and Automation Algorithm

01/2018 – 07/2018 – ANKARA, Turkey

## **MECHANICAL ENGINEER (PART-TIME) – TAI - TURKISH AEROSPACE INDUSTRIES**

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Practicing and utilizing CAD program for Flight Control System Design

08/2017 – 09/2017 – Sakarya, Turkey

## **PRODUCTION TRAINEE – TOYOTA MOTOR MANUFACTURING TURKEY**

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Observing manufacturing technologies and processes in a well-known automotive company

06/2017 – 07/2017 – Ankara, Turkey

## **R&D TRAINEE – TAI - TURKISH AEROSPACE INDUSTRIES**

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Design, implementation, process development of the composite structures used in aircraft applications

### ● **LANGUAGE SKILLS**

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	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C2	C1	C1	C1

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

### ● **DIGITAL SKILLS**

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Matlab | Python | Optimization | Data Analysis | Data Science | Deep Learning | Machine Learning

### ● **MEMBERSHIPS**

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METU IEEE, METU IAESTE

### ● **TECHNICAL QUALIFICATIONS**

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#### **Personal Qualification**

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Analytical thinking, Systematic problem-solving approach, Result-Oriented attitude, Commitment to implement

#### **Communication and interpersonal skills**

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Effective verbal-writing skills, Good team member, Working / living in harmony with people from different nations and cultures

### ● **HOBBIES AND INTERESTS**

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Playing Guitar, Aikido, Cycling