

MERT EMREM

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EDUCATION

İzmir Institute of Technology
B.S. in Mechanical Engineering

2017 - ongoing

EXPERIENCE

Fluid Mechanics Laboratory
Voluntary Internship

November 2018 - Present

- Provided assistance to lab work taking place at the time, this covered helping setting up measuring instruments and applying motion tracking software to be used for an offshore wind turbine prototype.

Teknopark İzmir - Teknoloji Transfer Ofisi
Voluntary Internship

February - August 2018

- Printed and assembled an open-source 3D scanner. Provided assistance for ongoing projects.

TECHNICAL STRENGTHS

CAD & CAE

Fusion 360, Ansys (Fluent, Mechanical), Solidworks, Simulink

Visual Design

Photoshop, Illustrator, Tableau

Document Typesetting

L^AT_EX

Programming

MATLAB, Octave, Python, C#

Motion Capture

Qualisys, Rokoko

LANGUAGES

English Proficient (C2 - Certified, Kaplan International)

German Intermediate

Turkish Native

CERTIFICATES AND CONFERENCES

15th METU Robotics Days

March 2018

Middle Eastern Technical University

- Competed in line follower category.

Autodesk Digital Design with Fusion 360 Workshop

12 May 2018

Autodesk, CADBİM

TEI Academy - Aviation Engines

March 2021 - June 2021

TUSAŞ Engine Industries Inc.

- Course content: Design, operation and performance of aircraft gas-turbine and piston engines. Engine materials, processes, assembly and QA. Manufacturing and nondestructive testing of engine components.

ToRK 2021 - 6th Turkish Robotics Conference

July 2021

Türkiye Robotbilim Konferansı

PERSONAL PROJECTS

Flight Physics Model

Unity 3D

- Built an airplane simulation including aerodynamic forces, ground effect, controllable aerodynamic surfaces etc. C#, using Blender and Photoshop for models and textures.

DIY Oscilloscope

DSO138

VOLUNTEERING ACTIVITIES

İnovaTİM

2018 - 2019

Educator

Türkiye İhracatçılar Meclisi

- Mentored high school students with a curriculum centered around artificial intelligence and machine learning. I facilitated their learning activity by demonstrating the content to cover and assisting them in the applied and theoretical processes.

IEEE IZTECH

2019 - 2020

Educational Activities Commitee Chairman

- Planned and supervised initiatives centered around teaching elementary and middle schoolers. Our team worked on a 6-week project on teaching the basics of robotics using LEGO Mindstorms.

IEEE IZTECH

2019

Design Coordinator, Referee - RoboLeague

- Managed the design team and personally worked on every aspect of RoboLeague 2019 regarding visual design, including banners, online promotions, schedules, logos, ID cards etc. as well as doing referee work for the mini-sumo competition.

IZTECH Anthropology Society

2019

Board member

- Worked on organizing the 1st Evolutionary Biology and Anthropology workshop in IZTECH.

ACADEMIC PROJECTS

Motion Capture & Dynamic Analyses of Daily Life Activities

2021

Group Project

- Motion capture of several daily activities and dynamic analyses executed using both Qualisys and Rokoko systems. Quantitative comparison done using Bland-Altman methodology and MATLAB code. Project and documentation available at: <https://github.com/Mert-Emrem/ME457-Coursework>

Forward & Inverse Kinematic and Force Analysis of a Serial RRP Manipulator

2021

- Project and documentation available at: <https://github.com/Mert-Emrem/ME460-Coursework>

ACADEMIC INTERESTS

AI, ML-DL, Robotics and automation, Control engineering, Aviation