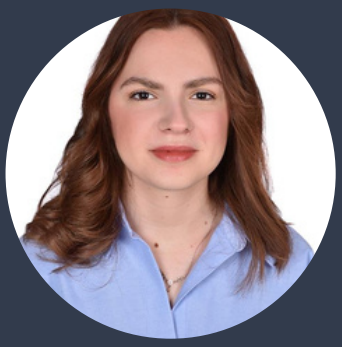

Contact

Phone

Email
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Linkedin
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Professional Skills

- Autocad
- Matlab
- Solidworks
- C
- Salome Platform
- SU2
- Witness Simulation Program

Soft Skills

- Communication
- Teamwork
- Easy and Fast Learning

Interests

- Chess
- Badminton
- Swimming

Language

English (Full Proficiency)

Turkish (Native)

İrem Beyza Ekici

Self-motivated and a fast learner fourth-year university student. Passionate about expanding my knowledge in Mechanical engineering. Efficient use of time is very important for both of my professional and private life.

Experience

Marmara University - Research Assistant

May 2025 - Current

Bluepath Robotics - Project Engineer (Spin-off from Ford Otosan)

May 2024 - April 2025

- The determination of the required number of AGVs for the Ford Cologne, Ford V801 Battery/Suspension Decking Project, Ford Romania, Akça Intralogistics, Siro Intralogistics, Beyçelik, and V801 Battery Transfer projects was conducted through a simulation carried out in the Witness program. After conducting the simulation, feasibility and quotation reports were prepared.
- As a Project Engineer, I collaborated with the team to oversee and manage the Tofaş, Craiova, and Ford Chicago projects.

Bluepath Robotics - Application Engineer (Spin-off from Ford Otosan)

November 2023 - May 2024

- Writing CAN communication node for Wiferion battery
- Writing CAN communication node for Sick encoder
- Contributing to Underdrive AGV (Automated Guided Vehicle) projects weighing 300 and 3000 kilograms.
- Formulating kinematic equations for an Omnidirectional AGV with Swerve Drive for Omnidrive AGV Project

Ford Otosan - Autonomous Mobile Robot Development Engineer

October 2023 - November 2023

- Integration of lidar into autonomous vehicle
- The improvement of localization through ground truth testing processes for Sick NAV350 lidar

TÜBİTAK 2209-B

April 2023 - Current

- Composite based air intake production and analysis project was supported by TÜBİTAK.

Ford Otosan - Autonomous Mobile Robot Development Intern

March 2023 - June 2023

- Gmapping and tuning of the map parameters
- Examination of lidar types and integration of lidar into autonomous vehicle
- Studied lithium-ion battery technology
- Studied on forklift type automated-guided vehicles

TUSAŞ - LIFT UP Researcher

October 2022 - Current

Composite-Based Air Intake Production and Analysis Project

In this project, validation studies were carried out with air suction comparison problems, where experimental data from the literature can be found. Thus, the suitability of open-source computational fluid dynamics (SU2) solvers was investigated. Then, the air intake CAD model was created using Salome Platform open-source software. After the design, production will be carried out by combining CFR epoxy composite. This study also measured the capability of open-source mesh generators and solvers for CFD analysis at different Mach numbers and outlet pressures of the composite-based air intake used in jet aircraft.

BİAS Engineering I İstanbul, Turkey

July 2022 - August 2022

R&D Intern

- Air cooling analytical modeling of the 2-Stage compressor was performed.
- Compressor cooling analysis was performed.
- Thermal analysis of a 2-Stage compressor was performed by using ADAMS and Marc programs.

Torun Brass Inc.I Kocaeli, Turkey

July 2021 - August 2021

Manufacturing Intern

- Learned about the types of grinding machines, cutting fluids and the tool types produced in Torun Brass.
- Studied on production of the welded cutting tools.
- Examined the preparation stages of the product for forging process and the working mechanism of the equipment that performs the forging process.
- Joined a training on operating the lathe and milling machine with CNC programming

Education

Marmara University, Bachelor's Degree in Mechanical Engineering (2019-2023)

GPA: 3,59/4 - Valedictorian of the Department and Second Highest-Ranking Student in Faculty

Cruise Control System Project for System Dynamics And Control Lecture. I designed a PI controller for autonomous cruise control using MATLAB and Simulink. Afterward, I implemented this PI controller to a design where I simulated disturbances that would happen in a car on a hill and tested my PI controller. Later, I used the PI controller that Simulink provided in the same environment and compared the results.
In Heat Transfer Lecture, I designed and evaluated the feasibility of a shell and tube heat exchanger to cool the ammonia to a specific temperature. According to the target transfer, parameters of surface area and the number of tubes, tube configurations with shell sizes, baffle spacing, mean log differential temperature, the correction factor, overall heat transfer coefficient, heat transfer capability of the heat exchanger, and effectiveness of heat exchanger were determined.

Marmara University, Master's Degree in Mechanical Engineering

October 2024 - Current

Publications

Osman Ören, İrem Beyza Ekici, "Numerical Analysis of A Nonlinear Elastic Composite Leaf Spring", International Journal of Advances in Engineering and Pure Sciences, Cilt 33, Sayı 4, 694 - 700, 30.12.2021