

# EFE DEMIRBAS

1725 Orrington Avenue #403, Evanston, IL, 60201  
efe.demirbas@northwestern.edu | +1 (224) 714-8982

## EDUCATION

**Northwestern University**, Evanston, IL

Anticipated 11/2022

Master of Science in **Mechanical Engineering** | Minor in **Engineering Management**

Cumulative GPA: **3.83/4.00**

Relevant Courses: Robotic Manipulation, Mechatronics, Machine and Deep Learning, Finite Element Modelling, Engineering Management, Decision Tools for Managers, Fluid Mechanics

**Middle East Technical University**, Ankara, Turkey

10/2017 — 07/2021

Bachelor of Science in **Mechanical Engineering**

Cumulative GPA: **3.22/4.00** (50<sup>th</sup> out of 399 graduates)

Relevant Courses: Machine Dynamics, Mechanical Vibrations, Kinematic Synthesis of Mechanisms, Design of Control Systems, Engineering Economy, Design of Renewable Energy Systems, Thermal Engineering

## EXPERIENCE

**CMS Wheels Inc.**

Izmir, Turkey

**R&D Engineer Intern**

06/2020 — 09/2020

- Led the design and development of two new alloy mixtures to be used in wheel rim casting by creating dog bone samples using the machine shop and running tensile tests.
- Refreshed current rim designs using CATIA and ABAQUS to be more casting friendly while still retaining its strength and vibration characteristics.
- Engineered swift and effective solutions for the ongoing fixture and machine failures during continuous production.
- Designed aerodynamic wheel covers and assembly geometries for the rims that are used in Renault electric cars utilizing CATIA, ANSYS and ABAQUS.

**NOYA Construction LLC.**

Istanbul, Turkey

**Mechanical Field Engineer Intern**

07/2019 — 09/2019

- Coordinated and planned the installation of air-conditioning units from start to finish for a residence building with 106 rooms by managing a team of 7 mechanics, using AutoCAD and MS Project.
- Monitored the current air-conditioning vents and plumbing progress to make sure there were no mistakes and justified progress payment using AutoCAD.
- Remodeled shaft and hallway mechanical models by coordinating with foreman's when there were unexpected obstacles on site using AutoCAD.
- Deployed fire protection systems by testing each subsector individually for leaks and powering on the fire pumps with the engineering team.

**FNSS Defense Systems Inc.**

Ankara, Turkey

**Production Engineer Intern**

06/2019 — 07/2019

- Engineered and prototyped a jet engine cover plate to be prone to vibrations and impact using Siemens NX and ANSYS which is now deployed to over 1200 armored vehicles.
- Designed 3 fixtures to hold the chassis and the plates at certain angles to make welding easier and faster using Siemens NX.
- Researched the effectiveness of different tooling materials, and presented my findings and progress to the CTO, and other managers using PowerPoint, successfully convinced them of a tooling improvement.

**CIHAZ Factory Inc.**

Baku, Azerbaijan

**Production Engineer Intern**

06/2018 — 09/2018

- Operated CNC lathes to make the tail end of RPG missiles and tested them to ensure every single one is airtight.
- Operated manual lathe to create 200 non-standard threaded bolts for railway construction, by only using physical blueprints.
- Operated a manual mill to produce 300 RPG trigger mechanism housings, by only using physical blueprints.
- Inspected finished machined parts with a vernier caliper to ensure that the dimensions were in tolerance range.

## LEADERSHIP

**NO2CO Inc.**

03/2021 — Present

**Co-Founder**

- Founded a start-up that established a framework for recycling machines, companies, and end-users to use a token that is earned by reduction of green-house gas emission.
- Adapted a prebuilt recycling machine to the specifications of the Turkish Government.
- Created a mobile application by managing a team of 3 computer engineers.
- Marketed the NO2CO application and the framework to global companies like Shell, Starbucks etc. by presenting the pitch-deck.
- Got accepted to Istanbul Technical Universities start-up incubation center for early-stage entrepreneurs, successfully passed the first two elimination rounds and was awarded with an office in the incubation center in Istanbul.

## ACTIVITIES

**Amateur Basketball League, Player** (Turkey)

2018 — 2021

**Sailboat Skipper**

2016 — Present

## SKILLS

**Computer:** Proficient in MATLAB, Python, TensorFlow, Scikit-learn, Siemens NX, AutoCAD, ABAQUS, ANSYS, CoppeliaSIM, Excel, Word, and PowerPoint.

**Language:** English (fluent), Turkish (native), French (beginner)