

# ATA ZAVARO

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## EDUCATION

**Cornell University**, Ithaca, NY

**Expected December 2025**

B.S. in Mechanical Engineering; Current GPA: 4.0/4.0

- Relevant Coursework: Advanced Product Design, Automotive Engineering, Mechanics of Engineering Materials, Thermodynamics, Fluid Mechanics, System Dynamics, Mechatronics, Linear Algebra, Better Decisions

## TECHNICAL EXPERIENCE

**Tesla**, Drive Systems Structures, *Mechanical Design Engineering Intern*, Palo Alto, CA

**August 2024 – December 2024**

- Working with a team of 8 engineers to design the drive units of several vehicles, and conducting validation tests
- Designed a part that will go into an upcoming drive unit, and made the engineering drawings, using CATIA V5 & V6
- Performed tests using a custom setup, to validate if a design change that would decrease the cost of a drive unit is viable
- Made tooling for a drive unit cover that would allow for easy installation of plugs and dowels
- Designed an adaptable gimbal rig that will be assembled by hand, and fit different drive units with easy transition

**Cornell Nexus**, *Mechanical Subteam Lead*, Ithaca, NY

**April 2022 – December 2023**

- Worked with a team of 31 engineers to design an autonomous robot that traverses beaches and collects microplastics from sand
- Led a team of 8 mechanical members to design the drivetrain from scratch within the budget and material limitations
- Modeled functions of the robot's mechanisms to test interactions between systems using SolidWorks
- Designed a base station with three floors where the robot will deposit microplastics and recharge its battery using solar energy
- Utilized ANSYS to analyze the stress and deformation of parts to ensure that the factor of safety was sufficient
- Redesigned the drivetrain so the motors were connected to the wheels through drive shafts supported by two bearings instead of the motor shaft, transferring the load of the robot from the motors to the shaft, preventing a major design flaw

**Organic Robotics Lab**, *Research Assistant*, Ithaca, New York

**May 2024 – Present**

- Working with Post-Doc and PhD students to conduct cutting edge research under the supervision of Professor Rob Shepard
- Using SolidWorks to design parts and experimental systems, which gets printed on Carbon 3D printer with an accuracy of 70µm
- Designing the mechanical system for a high frequency and velocity robot that uses liquid fuels like methane and butane
- Giving periodic presentations to the members of the lab, including the professor, about the development of the current project

**SAMET**, *Product Design Intern*, Istanbul, Turkey

**June 2023 – July 2023**

- Worked within the R&D department, along with 92 engineers, designing hinge systems, drawer systems, lift-up door systems, and the machinery required for production, such as vibratory feeder bowls and linear conveyor systems
- Participated in a full engineering design process, where a hinge was designed from scratch, prototyped multiple times, optimized, and prepared for delivery to a valued customer
- Analyzed the stress and deformation of a drawer system using ANSYS to make sure the design met US safety standards

**THINK NEURO**, *Research Assistant*, Istanbul, Turkey

**February 2020 - May 2021**

- Studied how advertisements, marketing tools, and catch phrases subconsciously affect individuals under Yener Giriskan PhD, the Head of Turkey Research Foundation
- Conducted sentiment analysis on data gathered from more than 100 patients and captured the feelings of "frustration" and "emotional arousal" the patients felt during the duration of the advertisement

## OTHER EXPERIENCE

**ALEF Turkish Jewish Community Youth Organization**, Istanbul, Turkey

**Sept. 2018 - May 2021**

- Led all the children born in 2006, and was responsible of their cultural, sportive, and social development
- Volunteered in the Organization Committee and actively worked during the European Day of Jewish Culture in Istanbul (2019); organized the KARA KARE Holocaust Remembrance Booklet; Designed and edited the 7-pages booklet which was issued on the International Holocaust Day, and distributed nationally together with Salom, the Jewish community's weekly publication

## ACHIEVEMENTS & CERTIFICATIONS

**Dean's List for all semesters**

**Cornell University Online Education: A Hands-on Introduction to Engineering Simulations (36 hrs.),**

- Certificate of Successful Completion: November 11, 2020
- Learned how to analyze real-world engineering problems using ANSYS simulation software
- Studied the fluid dynamics simulations using ANSYS Fluent, the structural mechanics simulations using ANSYS Mechanical, and the mathematical models underlying simulations

**IBM Online Education: Python Basics for Data Science (24 hrs.)**

- Certificate of Successful Completion: July 30, 2020
- Explored Python language fundamentals, and learned how to use functions and import packages, built NumPy arrays, and studied Python scripts, machine learning, and data visualization, and performed basic data analysis using IBM's Watson Stud

## SKILLS

**Languages:** Turkish (Native), English (Fluent), Spanish (Limited working proficiency)

**Software:** MATLAB, Ansys, Python, SolidWorks, Fusion, CATIA V5, CATIA V6

**Fabrication:** Manual Lathe, Manual Mill