DENİZ BAŞAR

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SUMMARY

My primary motivation is to leverage the skills I've acquired through the disciplines of Physics and Mechanical Engineering to contribute to the field of Rocket Science, with the ultimate aim of shaping a brighter future. As I try to enhance my skills and knowledge in the area, I am equally enthusiastic about sharing my knowledge and fostering curiosity among individuals of all ages, from children to adults by preparing videos and social media contents .

EDUCATION

Koc University   Sep 2020 - Present
Bachelor of **Physics** & **Mechanical Engineering** Double Major
- Grade: 4
- GPA: 3.1 / 4

University of Applied Sciences Upper Austria   July 2023 - Aug 2023
International Summer Academy in Engineering Member

Seviye Science High School   Jan 2018 - Dec 2018
Valedictorian
- Final Grade: 97.99 / 100

EXPERIENCE

Navigation Systems Mechanical Engineering Intern, ROKETSAN   June 2024 - July 2024
- Worked on static structural, modal, and vibrational analysis of navigation system parts using Abaqus.
- Designed a test structure using SRS Signal Processing System.

Team Captain, Teknofest Rocket Team   Oct 2023 - Present
- Provided administrative support to a team of 15, including calendar management, expense reporting, and meeting coordination.
- Worked as a system engineer for both Mechanics and Avionics teams.

Undergraduate Researcher at Mechanical Characterization Lab   Oct 2023 - March 2024
- Contributed to 'High-Performance Piezoresistive Accelerometers' project as an undergraduate researcher under the supervision of Prof. Erdem Alaca at Koç University.

Apprentice Engineer, ROKETSAN   Sep 2022 - Present
- Working with a mentor, having educations in the field of Rocketry, work ethics, academic writing.

Space - Rocketry Community Founder & President, KUASAR   Dec 2021 - Present
- Founded and leading a community of 100+ people attending Space Competitions and organizing Space events.

KEY SKILLS

- **Abaqus** Static Structural & Modal & Vibrational & Thermal Analysis.
- **ANSYS** Static Structural & Modal & Vibrational Analysis.
- **Siemens NX** CAD.
- **Solidworks** CAD.
- Analysis on **OpenRocket**.
- **MATLAB.**
- Design in **Canva.**
- **Python.**
- **Data Science in MATLAB**

- Agile project management.
- Fluent in English and Turkish.
- Problem solving.
- Collaborative working.
- Interdisciplinary working.
- Licensed ice skating.
- Licensed diving.
- Piano and violin playing.

PROJECTS

Design, Analysis, and Manufacturing of a Sounding Rocket   Sep 2024 - Present
- Designing a sounding rocket reaching 10000ft with a CONOPS including recovery.
- Team project for *Spaceport America Cup*.
- Utilized Solidworks, Abaqus, ANSYS, OpenRocket, and MATLAB.

Analysis of a Navigation System Using Abaqus   June 2024 - July 2024
- Did static structural, modal, and vibration analysis on a navigation system structure.
- Calculated theoretical values and read articles to validate the results found.

Design, Analysis, and Manufacturing of a Fiberglass Sounding Rocket   Oct 2023 - Sep 2024
- Designed a sounding rocket reaching 8000 ft with a CONOPS including recovery.
- Team project for *Teknofest* Competition.
- Utilized Solidworks, ANSYS, OpenRocket, and MATLAB.

Design and Manufacturing of Carbon-fiber Composite Nose Cone   2024
- Prepared and presented an innovative project on additive manufacturing of a rocket nose cone.

Rocket Nozzle Extension Bolt Optimization   2023
- Used ANSYS to make static structural analysis on ... nozzle extension to make a bolt optimization.
- Project for MECH303 - Machine Design course.

Modelling of a Double-Crank Mechanism Using MATLAB   2023
- Project for MECH307 - Numerical Methods for Mechanical Engineering course.

CAD Design of an Electric Shaver   2022
- Project for MECH203 - Mechanical Design course.

AWARDS

FIRST Lego League Regional & National Championship Awards   2018
- Worked as a team member of robotics team in high school.
- First-place ranking out of 500 competing teams.
- Designed a robot capable of successfully completing designated missions.
- Created an impactful project aimed at addressing the issue of water scarcity.
- Represented our achievements at the Houston Championship held in the United States.

8th Place in Teknofest Rocket Competition Medium Altitude Category   2024
- Worked as the team leader of 15 which became 8th in Teknofest Rocket Competition Medium Altitude Category.