

YUSUF ERKOÇ

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EDUCATION

BS - Mechanical Engineering Sep 2024 - Present
Gebze Technical University, Kocaeli/Turkiye

High School Sep 2020 - Jun 2024
Kadikoy Anatolian Imam-Hatip High School, Istanbul/Turkiye
Grade: 97.5 / 100

SKILLS

- **Engineering Design:** Fusion 360, SolidWorks, ANSYS, AutoCAD, Maxsurf
- **Programming:** Python, C++ (Embedded)
- **Development Tools:** VS Code, Arduino IDE's, Linux OS, ROS
- **Office Software:** Microsoft Office, LaTeX
- **Hands on Skills:** Mechanical design, CFD analysis, composite manufacturing, CNC/laser cutting, prototype assembly, machine testing and maintenance, embedded system integration

EXPERIENCE

İTÜ Marine Robotics LAB / Undergraduate Research Assistant Dec 2025 - Present
Istanbul Technical University, Istanbul/Turkiye

Analyzing mechanical requirements and designing custom mounting solutions for LIDAR sensors to maximize field-of-view and data accuracy.

Developing and optimizing PID control algorithms on Arduino-based systems to ensure stable navigation and attitude control of unmanned marine vehicles.

Executing the physical integration of electronic components and sensors, focusing on structural integrity and maritime-grade hardware standards.

Collaborating with a multidisciplinary team to bridge the gap between autonomy software and mechanical hardware through iterative prototyping.

TEİ - EMARLAB / Undergraduate Research Assistant Nov 2025 - Present
Gebze Technical University, Kocaeli/Turkiye

Actively involved in the design, manufacturing, testing, and maintenance of laboratory-scale production machinery used in materials research. Participating in machine testing and performance evaluation to ensure reliable and repeatable production processes.

Supporting experimental studies through thermal analyses using ANSYS Fluent and static structural analyses using ANSYS Mechanical, assessing thermal behavior and structural integrity of components under operational conditions.

Working at the intersection of manufacturing, experimental physics, and mechanical engineering, contributing to both hands-on production activities and simulation-based validation.

Technology Lead & Team Captain Oct 2024 - Oct 2025
Seferber Technology Community - Gebze Technical University, Kocaeli/Turkiye

Led CFD-driven mechanical design, composite manufacturing, and system integration for an unmanned surface vehicle. Oversaw production methods including foam cutting, laser CNC machining, and carbon fiber layup. Coordinated multidisciplinary teams and contributed to electronic component selection and system-level alignment.

Early Technical Experience - Mechanical Team Member
Kadikoy Anatolian Imam-Hatip High School, Istanbul/Turkiye

Nov 2020 - Apr 2024

Participated in the design and development of unmanned aerial vehicles (UAVs) and unmanned underwater vehicles (UUVs), contributing to mechanical design, subsystem integration, and system planning. Actively involved in preparing technical documentation and design reports for competition evaluation.

First Place - TÜBİTAK (Teknofest) Rotary Wing UAV Competition (2021)

UUV project concluded at the technical report evaluation stage.

LANGUAGES

Turkish (Native) • English (advanced)