

Burhan Karahasan

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EDUCATION

Koc University , College of Engineering	Istanbul, Turkey
Bachelor of Science in Electrical and Electronics Engineering, Fourth year	2020-Present
Bachelor of Science in Mechanical Engineering, Fourth year	2018-Present
<ul style="list-style-type: none">CGPA: 3.93 out of 4.0Projected graduation is in 2024.	

RELEVANT COURSES

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| <ul style="list-style-type: none">RoboticsLinear Systems Theory | <ul style="list-style-type: none">Introduction to Machine LearningComputer Vision with Deep Learning |
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PUBLICATIONS

Munam Arshad, Eda Guven, Burhan Karahasan, Ismail Lazoglu. "A novel real-time wireless sensor integration for enhancing positive pressure system operation in single limb passive vented circuit". *Biomedical Signal Processing and Control* 85 (2023).

- A wireless proximal sensor system was developed to improve the performance of single limb vented pressure support devices.
- Worked on the electronic circuit design, sensor communication, preparing visuals and 3d design of the device.

ACHIEVEMENTS

- Full merit scholarship recipient for undergraduate education in Koç University.
- Received Vehbi Koç Honor awards for 4 semesters.
- Deloitte Education Foundation Scholarship recipient.

EXPERIENCE & CAMPUS INVOLVEMENT

Koc University Manufacturing and Automation Research Center, <i>Undergraduate Research Assistant</i>	Mar. 2021-Present
<ul style="list-style-type: none">Currently conducting research on a robotic guided surgery project, working on robotic manipulator algorithm design for path optimization in minimally invasive surgical brain operations, generating surgical paths avoiding any incisions through critical zones or brain vessels.Previously conducted research on a mechanical ventilation device and published a paper, worked on the serial communication of several sensors & devices, optimized the system and improved the sampling rate of sensors 20 times.	
Ubicro, <i>Prototyping and Testing Engineer</i>	Aug. 2022-Dec. 2022
<ul style="list-style-type: none">Implemented electronic controllers on aeroponic farming machines and assembled prototypes.	
DeltaV Space Technologies, <i>Guidance, Navigation and Control Intern</i>	Aug. 2022-Sep. 2022
<ul style="list-style-type: none">Worked on flight data storage using STM32 microcontroller devices.Reported several research about deep learning applications on rocket systems, hybrid altimeter systems in supersonic aircrafts and calibration & characterization of IMU sensors & noise effects.	
Turkish Aerospace Industries, <i>Integrated Logistics Support Intern</i>	June. 2021-July 2021
<ul style="list-style-type: none">Worked with the equip that conducts tests on unmanned aerial vehicle engines and prepares the repair and maintenance manuals for post-sales in integrated logistics support department.Coded a form application that helps to filter the maintenance manuals.	

TEACHING ASSISTANTSHIPS & TUTORSHIPS

- Provided academic peer support to students in MATH106: Calculus, MECH201: Statics and Mechanics, MECH206: Dynamics courses.

TEAM PROJECTS

Koc University Autonomous Drone Team (KUADRONE), Team Leader

2020-2021

- Competed in TUBITAK's 5th International Unmanned Aerial Vehicle competition.
- Organized the team hierarchy, and the documentation of the project.
- Devised the mission planning, thrust calculations and electronic circuit design.

TECHNICAL SKILLS

Programming Languages: MATLAB, Python, Java/JavaFX, C/C++, VHDL, Visual Basic

Programs:

Computer Aided Design / Computer Aided Manufacturing: Siemens NX, SolidWorks, Fusion 360

Finite Element Analysis: ANSYS Mechanics, ANSYS Fluent

Electronics Circuit Design and FPGA Programming: PSpice/LTSpice, Xilinx ISE Design Suite

Other: MATLAB Robotics Systems Toolbox, Statistics and Machine Learning Toolbox, Signal Processing Toolbox; Generative design via Autodesk Fusion 360; Machine Learning & Deep Learning; Computer Vision

Languages: Fluent in English, basic understanding in Chinese