BERKE ATASEVEN

bataseven15@ku.edu.tr • +90 541 520 07 97 • linkedin.com/in/berke-ataseven
Portfolio: https://bataseven.github.io GitHub: https://github.com/bataseven
Rumelifeneri Mahallesi, Rumelifeneri Yolu, Koç
Universitesi, 34450 Sariyer/Istanbul

A passionate, hands-on mechanical engineer with a keen interest in interdisciplinary engineering projects

EDUCATION

Koç University **MSc Mechanical Engineering** *Sep 2020 – Present*

- Area Courses: Deep Learning / Computer Vision / Biomedical Signal Processing
- Overall GPA: 3.67

Koç University **BSc Mechanical Engineering** *Sep 2015 – June 2020*

- Area Courses: Robotics / Vibration Theory / Rocket Propulsion / Machine Design
- Senior Year Project: TELE-BOT, teleoperated mobile robot with a manipulator. Was selected as the best engineering project class of 2019-2020

EXPERIENCE

Co-Founder **Tedavem Bilişim ve Elektronik Sistemleri** *July 2021 – Present*

- Start-up funded by The Scientific and Technological Research Council of Turkey, TÜBİTAK
- Developing IOT-Based Sensor Systems for remote patient tracking in hospitals
- Responsible for mechanical design / machine learning / system integration

Research Assistant **Robotics and Mechatronics Laboratory** *September 2020 – Present*

- Developed a haptic interface capable of giving force and weight feedback
- Robotic simulation using Gazebo and ROS
- Implementing motion planning algorithms

R&D Engineer Summer Intern **Hattat Traktör** *June 2018 – August 2018*

- CAD Design of a rollover protection structure for various vehicles
- Finite element analysis of specific vehicle components

PROJECTS

- A mobile robot with a robotic manipulator capable of autonomous object tracking won the Best Engineering Project Award for the 2019 – 2020 academic year. V1 – V2
  (Computer Vision, Autonomous Driving, Hardware Design, PCB Design, Unity, C++)
- CANSAT Competition: Designed and manufactured a delta wing payload with asymmetric wings. The payload can gather atmospherical information as it descends on a spiral trajectory.
  (MATLAB, Simulink, Hardware Design, Sensor Integration)
- TUBITAK Autonomous UAV Competition: Coded and tuned the flight control system from scratch. Devised the ground control software to track and autonomously command the quadcopter.
  (Simulink, Control Systems, Autonomous Control, Java, C++)
- Developed a prototype to notify nurses in case of venous needle dislodgement of patients. Implemented machine learning techniques in a practical use case scenario. Achieved over 89% detection rate.
  (Machine Learning, Convolutional Neural Networks, NumPy, Torch)
- A Vibrotactile Hand Interface for VR tracking won the Best Engineering Project Award for the 2018 – 2019 academic year.
  (Computer Vision, Hand-Tracking, C++, 3D printing, Hardware Design)

PUBLICATIONS

- Ataseven B., Madani A., et al. "Physical Activity Recognition using Deep Transfer Learning with Convolutional Neural Networks," IEEE CyberSciTech/PICom/DASC/CBDCom 2022

PATENTS

- **Nasogastric Tube Design with Self-Induced Momentum**

A new nasogastric tube design aims to minimize the skill required by the medical staff for nasogastric tube insertion.

- **Flexible Acoustic Sensor Feedback System Monitoring PEG/ PEJ/Drainage Dislodgements in Patients**

A flexible acoustic sensor system that detects and reports the PEG/ PEJ/ medical drainage dislodgments in patients.

- **Sensor Feedback System Monitoring Venous Dislodgements in Patients**

A sensor system to detect and report venous dislodgments in hospital patients. Applied for a patent in collaboration with KUTTAM and Koç University Technology Transfer Office.