CAN KOCABALKANLI

Baltimore, MD 21218 | +1-443-808-9770 | cankocabalkanli@gmail.com | ckocabalkanli.github.io/Can

EDUCATION

Johns Hopkins University

M.S.E. in Robotics
GPA: 3.81/4.00 Exp. May 2020

B.S. in Mechanical Engineering
Minor in Robotics, Mathematics
General & Departmental Honors

GPA: 3.70/4.00 May 2019

Dean's List: Fall 2015, 2016, 2017, 2018; Spring 2016, 2018, 2019

TECHNICAL SKILLS

Software & Languages:

Pro/E, SolidWorks, MATLAB, ROS, COMSOL, ANSYS, Mathematica, Arduino, Java, Python, C++, C#

Skills & Algorithms:

- SLAM, motion planning
- Robot dynamics, kinematics, control, and error propagation
- Mechatronic system design and implementation, electronics
- Hardware/software integration
- Computer vision & image processing with Fast Fourier Transform
- Machine shop tools, laser cutting, 3D printing

Languages: Turkish, English, Intermediate Spanish

RELEVANT COURSEWORK

- Algorithms for Sensor Based Robotics
- Robot Device Kinematics, Dynamics, Control
- Dynamics of Spacecraft
- FFT in Computer Graphics
- Computer Vision
- Electronics & Instrumentation *(Teaching Assistant)*

ENGINEERING & RESEARCH EXPERIENCE

Galen Robotics: **Baltimore, MD**
Research Engineer ***July 2018 - Present***

- **Designed a force-sensing surgical drill-holder** for sensing forces at a surgical drill tip during cochlear surgery using Pro/E and SolidWorks.
- **Designed electronic circuit** and **developed software** to read and process data from Hall-effect sensors and **performed engineering tests.**

Mechanical Engineering Senior Design: **Baltimore, MD**
Designer for Smart Guitar ***August 2018 – May 2019***

- **Developed, tested, calibrated sensing mechanism and electronics** in team to measure the forces applied by musicians on a guitar fretboard for research, injury prevention, and therapy purposes. ***(Filing Patent)***
- **Designed, built, and tested** Smart Fretboard system prototype and **test fixtures and methods** using SolidWorks, machine shop tools and rapid prototyping.
- ASME Johns Hopkins Mechanical Engineering 2019 **Best Senior Design Project Award**

LCSR Vaccine Automation: **Baltimore, MD**
Research Engineer ***July 2017 – March 2019***

- **Led team of 4 students to design and implement** a mechatronic processing system that prepares mosquitoes to be robotically operated to produce malaria vaccines. (***Filing Patent)***
- **Co-Authored and presented paper** in Conference on Automation Science and Engineering (CASE) 2019.
- **Designed system components** in Pro/E and SolidWorks and rapid prototyped them.
- **Delivered, reported, and documented** weekly deliverables such as prototypes, test results, analysis to multiple cross-functional teams and stakeholders.

Robot and Protein Kinematics Lab: **Baltimore, MD**
Research Assistant ***April 2017 - July 2018***

- **Developed software in Python and C++** for an android to imitate human users **real-time** based on data from an **infrared sensor.**
- **Developed software in C#** to recognize discrete gestures such as raising a hand and leaning head to be used with action recognition algorithms.