MUSTAFA MERT SAYGI

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EDUCATION

Columbia University — *Bachelor of Science* — May 2024
Major: Electrical Engineering **Minor:** Mechanical Engineering
GPA: 4.10
Relevant Classes: Signals and Systems, Circuit Analysis (LTSpice), Computer Graphics and Design, Electronic Circuits, Fundamentals of Computer Systems, Python for Engineers, Data structures in Java, Classical and Quantum Waves
Transcript

EXPERIENCE

Columbia University Formula SAE Racing Club — Sept. 2020 - Present
Charging System Lead of the High Voltage Team & Shutdown System Lead of the Low Voltage Team
- Managed a team of three and six people respectively as the Charging System Lead and the Shutdown System Lead
- Designed and manufactured the charging cart that houses the accumulator and charger during the battery pack charging process using SolidWorks and built a dead man's brake system for the cart with and aluminum block and steel rods using a waterjet
- Tested the Shutdown Circuit and Brake System Plausibility Device using function generators and oscilloscopes and redesigned the two boards on KiCad to fix some errors on the printed circuit boards
- Devised the charging procedure of the EV battery packs and wrote the CAN bus protocols between the main MCU of the vehicle, the battery management system, and the charger unit using MATLAB to ensure safe yet fast charging

Columbia University Robotics Club — Sept. 2021 – Present
Mechanical Engineering Team on the MATE ROV project
- Designed the frame of an underwater robot to compete in the MATE ROV competition on SolidWorks then manufactured the frame by water jetting and drilling high density polyethylene as well as some 3D printed components
- Designed, 3D printed, and assembled propeller safety guards for the MATE ROVB robot using SolidWorks and Ultimaker Cura

Columbia University Engineering Student Council — Sept. 2021 – Present
Technology Representative
- Ensured that the Columbia student body had reliable access to basic technological needs such as computers and printers
- Coordinated and lead two teams of 20+ students to maintain and update the official WikiCU website as well as the student-lead professor review website culpa.io

Global Youth Mentorship Initiative Club (GYMI) — Sept. 2021 – Present
Vice-President
- Led a 6-member team to publish a podcast series called GYMI Some Time on Spotify and edited each episode using GarageBand
- Supervised and guided 12 members as they developed curricula for middle-school level classes on ethics and mindfulness

Related Digital *(omnichannel campaign management solution provider based in Turkey)* — July. 2021 – Sept. 2021
IT Intern
- Developed unit tests for approximately 20 REST API methods in .NET Core for company's customer data analysis software
- Designed an app to encrypt and relocate 10,000+ customer files from local storage to a Microsoft Azure Storage Server using SQL

Getir *(e-commerce company based in Turkey)* — June 2018 – Aug. 2018
Coding Department Intern
- Compiled 30,000+ lines of JavaScript code of the Getir application into logic flow diagrams to be used in new employee orientation
- Produced and edited the App Store advertisement video for the Getir application using iMovie

PROJECTS

Harvard CS50: Game Development Track — June 2021 – Aug. 2021
Online Course
- Completed 11-Week Online Course where I learned 2D game development with Lua and 3D game development with Unity
- Designed my own 3D maze game that could be played with virtual reality headsets using Unity and coding in C#

The Impact of Social and Emotional Learning on Creativity Development — Jan. 2021 – Sept. 2021
Co-Author of a Book Chapter
- Investigated and wrote a book chapter about the link between SEL and creativity in students
- Published the chapter in the book "Creativity as Progressive Pedagogy: Examinations Into Culture, Performance, and Challenges"

SKILLS

Coding: Python, JavaScript, HTML/CSS, Java, Arduino, Lua, C#, C, C++, SQL, MATLAB, Simulink, .Net CORE, Swift
Design: SolidWorks, KiCAD, LTSpice, iMovie, GarageBand, GIMP, Photoshop
Languages: English, Turkish, Spanish, Arabic
Soft Skills: Leadership, conscientiousness, communication, time management, perseverance
Interests: Formula 1, Formula E, Basketball, Piano, Guitar, Stock Trading