

Ibrahim Merie

ENGINEER BASED IN WEST PALM BEACH, FLORIDA

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My interests lie in software development, data analysis, and mechanical design.

LANGUAGES/Frameworks	SKILLS	TECHNOLOGIES	TOOLS	
<ul style="list-style-type: none">• Python• Java• SQL• MATLAB	<ul style="list-style-type: none">• HTML5• Bootstrap	<ul style="list-style-type: none">• Object Oriented Programming• Data Acquisition and Analysis• Automated Testing• Mechanical Design	<ul style="list-style-type: none">• Microsoft Excel• Solidworks/AutoCAD• ABAQUS FEA	<ul style="list-style-type: none">• GD&T• 3D Printing• Assembly Drawings• Lathing/Milling/Sheet Metal

EDUCATION

University of Florida, B.S. Mechanical Engineering — 2019

- GPA 3.30/4.00, Presidential Scholarship for all semesters.
- Semester abroad in Germany attending Technical University of Berlin.

WORK EXPERIENCE

Automated Testing Developer, Telesto Group LLC — 2019-Present

- Developed and maintained unit testing scripts to reduce the effort and cost of manual testing.
- Resolved memory corruption and other technical issues by leveraging strengths in debugging and integration testing.

Recruiter, 2020 U.S Census Bureau — 2019 (August-December)

- Collected over three hundred part time job applications in the West Palm Beach community.
- Apportioned federal funding within the state of Florida by ensuring accurate census data.

Mechanical Design Engineer, Solar Gators SAE Design Team — 2017-2018

- Collaborated with a team of twenty engineers to design and fabricate a solar powered vehicle.
- Used Finite Element Analysis to ensure structural integrity of aluminum mounting brackets.

PROJECT EXPERIENCE

Autonomous Robot Arm Air Hockey — Fabrication and Programming of a Robot Arm

- Designed and fabricated a dual-axis robot arm using off the shelf components and 3-D printed parts.
- Implemented optical encoders and a camera vision system to track arm position and puck position, respectively.
- Programmed a PID controller using LabVIEW to deliver motor commands.
- Used MATLAB to relate reference frames through Jacobian and Transformation matrices.

Virus Reproduction Simulation — Stochastic Simulation of Virus Populations

- Created a Python application that simulates the reproduction and mutation of viruses within a host.
- Designed fully functional GUI to display the virus population(s) over time as a graph.
- Developed the program to be responsive and accept user inputs as simulation parameters.

Remotely Controlled Robot Retrieval — Mechanical Design and Manufacturing of RC Robot

- Designed a robot in CAD with the ability to maneuver through an obstacle course and transport various objects.
- Manufactured the robot (mainly aluminum) using CNC, milling, lathing, and sheet metal bending.
- Documented every component of the design in assembly and sub-assembly drawings with tolerancing.