Jonathan **Duarte**

MECHANICAL ENGINEER

United States

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Summary

2+ years experienced Engineer with proven excellence in designing, installing and testing electro mechanical systems. Adept at executing projects with proposed deadline and providing support to the leadership as per the needs of the organization. Highly proficient in mechanical drawing, system design & programming.

Skills

Key Skills	System Design, Mechanical Drawing, Team Work & Leadership, Report Generation, Product Development
Software	SOLIDWORKS, Zemax, ANSYS
Programming	Excel VBA, Java, MATLAB
Mechanical Tools	Calipers, Depth Gauges, Micrometers, Multimeter, Sin Bar, Interferometer, Spectrometers

Experience

FLIR Systems, Inc. *Marlborough, MA, USA*

MECHANICAL DESIGN ENGINEER (CONTRACT) *August 2019 - May 2020*

- Planned and executed blueprints and technical drawings to new company template for state-of-the-art high-capacity infrared optic-mechanical systems, increasing industrial output by 20%
- Interpreted and implemented optic-mechanical designs through tolerance analysis on ASME Y14.5-2009 within a variety of programs simultaneously.
- Managed engineering change notice process while liaising with manufacturing operations

Personal Projects

Portfolio Website

HTML, CSS, JAVASCRIPT *May 2019*

- Designed a responsive personal portfolio to showcase my skills and abilities within the mechanical engineering field.
- Utilized Font Awesome, wow.js and smooth scroll to beautifully capture browsing in all screen sizes.

SOLIDWORKS Improved Robot Assembly

MATLAB, SOLIDWORKS *March 2019*

- Designed a 4 linked 1/3 scale industrial arm robot that performed a pick and place kinematics simulation.
- Created a MATLAB GUI interface that sent lateral, longitudinal, and angular commands to the robot.
- Used MATLAB workspace to stabilize feedback within a closed loop control during intensive operations.

Dynamic Windshield Simulation Project

MATLAB *December 2018*

- Performed a dynamic simulation of the four-bar windshield wiper mechanism driven by the AM equipment 238 motor.
- Maintained an appropriate response time of 7% to test the torque limits of the AM 238 using Newton's Method.
- Data resulted in a positive crank velocity with minimal fluctuations for long periods of its life cycle.

Education

University of Notre Dame *Notre Dame, Indiana, USA*

B.S. IN MECHANICAL ENGINEERING *2015 - 2018*

- Participated in 3:2 Program Engineering partnership with Assumption College and Notre Dame

Assumption College *Worcester, Massachusetts, USA*

B.A. IN MATHEMATICS *2012 - 2015*