Jonathan Duarte

Motivated duel degree candidate seeking a challenging technical position with a focus on development

jonathanduarte313@gmail.com ♦ Central Falls, RI, 02863 ♦ (401) 390-1556 ♦ www.jaytsystems.com

EDUCATION

B.S. in Mechanical Engineering
University of Notre Dame, May 2018

B.A. in Mathematics
Assumption College, May 2017

- **Skills:** C and C++, Java, Windows Command Prompt, Abaqus, Fortran, LaTeX, MATLAB, Mathematica, Solid Works, PTC Creo Parametric, HTML5
- **Courses:** C++, Introduction to Electrical Engineering, Orbital and Space Dynamics, Wind Turbine Performance Control and Design, Differential Equations Vibrations and Controls, Heat Transfer, Fluid Mechanics

EXPERIENCE

Mechanical Engineer
Yushin America Inc., Cranston RI
November 2018

- Performed training for an End Of Arm Tool curriculum using tools such as Oracle and SOLIDWORKS to quote, design, confirm, and ship customized robots
- Assisted in sophisticated robot designs of other mechanical engineers and kept record of any failures

Mechanical Engineering Intern
Worcester Polytechnic Institute, Worcester MA
June 2015 – August 2015

- Researched and Identified Nacre's mechanical structure through sample electron microscope imaging
- Assembled finite-element models based on Nacre's structure through Abaqus
- Stabilized Nacre's finite element models with given forces, reactants, elasticity, and boundary conditions

PROJECTS

SOLIDWORKS Improved Robot Assembly
March 2019

- Designed a robot which could perform a simple kinematics simulation of its trajectory
- The robot was created and assembled in SOLIDWORKS while the MATLAB GUI program was generated by MATLAB

Notre Dame Rocketry Team
October 2017 – April 2018

- Brainstormed and modeled an initial design of a small rover using SOLIDWORKS for prototyping analysis
- Participated as a NDRT Safety Officer for the construction, testing, and launch of the rover body that includes possible safety hazards for team members

Senior Design: Automated Gantry
January 2018 – May 2018

- In a team of six, we conceptualized and assembled an indoor miniaturized linear gantry to assist automated manufacturing line for AME Automation
- I implemented a State Space Control algorithm into MATLAB by taking the inverse kinematics of the gantry which gives the complete movement of the machine

Dynamic Simulation Project
November 2017 – December 2017

- In a team of three for my Mechanisms and Machines course, I helped conceptualize and execute dynamic simulation of the four-bar windshield wiper mechanism driven by a gear motor