Marcos Rodríguez

300 Washington Street Apt 3
Brookline, MA, 02446

rodriguez.marc@husky.neu.edu

(617)935-2016

LinkedIn: www.linkedin.com/in/rodriguez-marcos

Portfolio: https://rodriguezmarc.wixsite.com/resume-portfolio

SKILLS

OS:
Linux, Windows, MacOS

Hardware:
FPGA (ZedBoard), oscilloscope, function generator, multimeter

Software:
SolidWorks (CSWA, certificate ID: C-4S2TFUYF3M), MATLAB/Simulink, PTC Creo, ANSYS Workbench, PSpice, LabVIEW, Mathcad

Programming/Mark-up:
Verilog, C/C++, Java, Python, LaTeX

Languages:
English (native), Spanish (native), Japanese (intermediate)

Machining:
Proficient with mill, lathe, band saw, power tools

Automation:
Arduino, Pneumatics

Technical: Soldering, 3D printing, laser cutting

Available January 2021

EDUCATION

Northeastern University (Boston, MA) (December 2020)
Candidate for Bachelor's in Mechanical and Computer Engineering
GPA: 3.22/4.0
Relevant Coursework:

- System Analysis and Control (MATLAB)
- Object Oriented Design (Java)
- Embedded Design (C++, Simulink)
- Digital Logic Design (Verilog, MIPS)
- Algorithms (C++)
- Circuits (MATLAB signal processing)
- Fundamentals of Networks (Python)
- Finite Element Analysis (ANSYS)
- Thermodynamics
- Materials Science
- Dynamics and Vibrations
- Mechanical Engineering Design
- Heat Transfer
- Fluid Mechanics

Honors:
Brookline Community Northeastern University Half Scholarship, Class of 1943 Engineering Scholarship, Robert and Sheila Nunley Scholarship

EXPERIENCE

TechShare (Tokyo, Japan) - *Engineering Co-op* (7/19 - 12/19)

- Designed end effectors and attachments for Dobot Magician and Ufactory xArm for industrial and educational applications
- Designed electrical housings and outsourced to produce quantities of 100 to 500
- Exhibited products at IREX and other robotics exhibitions throughout Japan
- Collaborated with SDEs to develop a computer vision based robotic arm bolt picking and sorting solution for industrial applications

Amazon Robotics (North Reading, MA) - *Hardware Eng. Co-op* (7/18-12/18)

- Assessed project feasibility by using historic data, data mining, FEA
- Modified and created parts and assemblies in SolidWorks, completed ECOs, MCOs, and MDs in Agile for company wide use
- Updated ISO and AGMA standards using tolerance stack-ups and manufacturer data to maintain reliability and decrease part costs
- Designed and assembled test fixtures and automated processes with scripts
- Composed, executed, documented tests, and presented results to project teams

iRobot (Bedford, MA) - *Systems Test Eng. Co-op* (7/17 - 12/17)

- Designed, assembled, and modified test fixtures physically and in CAD to test at a system level understanding product mechanism lifetime
- Conducted tests that affected design at a system level using DAQs, power supplies, thermal/humidity chambers, etc.
- Automated data organization and visualization with scripting in Python
- Completed iRobot extensive soldering/crimping and machine shop training courses and applied skills to assemble and modify fixtures
- Assisted rapid prototyping lab, consisting of HP, Stratasys, and Markforged 3D printer platforms, with maintenance and production of prototypes

ACADEMIC/PERSONAL PROJECTS

Mechatronics Research Assistant (2017- 2019)

- Worked on independent projects and assisted graduate students with research including soft robotic actuators, folding robots, and education outreach projects

Embedded Design Course Robotic Arm Labs (2018)

- Programmed in C++ in a Linux environment to actuate Simulink interfaced robotic arm's servos to different positions at different speeds
- Used object-oriented programming for labs consisting of controlling arm

OTHER EXPERIENCE

GPI US (Cambridge, MA) - *Coordinator* (3/16 - Present)

- Lead group discussions and encourage participation on week long English educational program
- Serves as Boston tour guide on designated tour day