Marcos Rodríguez

Available for fulltime employment January 2021

300 Washington Street Apt 3
Brookline, MA, 02445

rodriguez.marc@northeastern.edu

Website portfolio: https://rodriguezmarc.com

(617)935-2016

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

SKILLS

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 (conversational)

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

Automation:
Arduino, Pneumatics

Technical: Soldering, 3D printing, laser cutting

EDUCATION

Northeastern University (Boston, MA) (December 2020)
Candidate for Bachelor's in Mechanical and Computer Engineering
GPA: 3.23/4.0
Relevant Coursework:

- System Analysis and Control (MATLAB)
- Object Oriented Design (Java)
- Embedded Design (C++, Simulink)
- Algorithms (C++)
- Digital Logic Design (Verilog, MIPS)
- Circuits (MATLAB signal processing)
- Fundamentals of Networks (Python)
- Finite Element Analysis (ANSYS)
- Thermodynamics
- Materials Science
- Dynamics and Vibrations
- Mechanical Engineering
- 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
- metal electrical housings and handled outsourcing communications for production quantities of 100-500
- Presented 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 (N. Reading, MA) - *Hardware Eng. Co-op* (7/18-12/18)

- Assessed project feasibility with historic data, data mining, and FEA
- Completed logistical part and assembly tasks (ECO, MCO, MD) in Agile
- Updated ISO and AGMA standards with stack-ups and manufacturer data
- Devised and assembled test fixtures and automated processes with scripts
- Developed, executed, documented tests, and presented weekly results

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

- Designed, assembled, and modified system level product lifetime test fixtures that consisted of different sensors and controllers
- Tested at a system level with DAQs, power supplies, environment chambers
- Automated thermal test data organization and visualization with Python
- Completed iRobot extensive soldering/crimping and machine shop training courses and applied skills to fixture development
- 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)

- 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 discussions and encourage participation on week long English program for students from Japan