Nathan A. Riojas

me@nathanriojas.com | nathanriojas.com

Summary Highly motivated engineer capable of leveraging knowledge to design systems across several fields and industries, able to lead cross-functional teams, and passionate about software programming

Education

Bachelor of Science, Mechanical Engineering **May 2016**
Computer Science Minor | Robotics Certificate

The University of Texas at Austin **GPA 3.55**
Related Courses: Dynamic Systems and Controls, Robot Mechanism Design, Vehicle System Dynamics and Controls, Engineering Design Methodology, Mechatronics, Heat Transfer, Fluid Mechanics, Solid Mechanics, Software Programming and Data Structures, Mobile Computing

Experience

06/16–Present **Equipment Engineer, NXP Semiconductors**
- Maintained and improved robotic equipment operation in the chemical mechanical polishing stage

02/15–01/16 **Research Assistant, Biomechanics Experimental Laboratory**
- Designed biaxial testing system to analyze heart tissue to aid in surgical repair of the mitral valve
- Machined parts to correct or improve existing assembly
- Minimized redesign changes using SolidWorks to incorporate load cells and hardware

05/15–10/15 **Research Assistant, REWIRE Laboratory**
- Fabricated a gait rehabilitation robot with considerations for smooth motion and space efficiency
- Created crankshaft mechanism using SolidWorks and engineered solutions to fit the robot
- Analyzed input/output robot velocity using MatLab's position differentiation capabilities

01/14–08/14 **Maintenance/Reliability Engineer, The Dow Chemical Company**
- Conducted FMEAs in engineering teams for a compressor and steam turbine
- Consolidated gauze change plans for plant converters to reduce costs by 75%

Projects

01/16–5/16 **MMAxCalc Mobile Application, Mobile Computing Final Project**
- Developed UI/UX for an Android app in Android Studio that calculates user punching power
- Leveraged SDK for Javelin Device wearable to read accelerometer data via Bluetooth
- Created SQLite database to manage user profiles and access past data

01/16–5/16 **Capstone Design Project Team Leader, Design of an Automated Wafer Handling System**
- Worked to optimize in-line metrology process to minimize semiconductor manufacturing time
- Designed 3 DOF robot from composite actuator systems to meet precision and accuracy goals

01/16–05/16 **Modeling and Simulation of Vehicle Behavior, Vehicle System Dynamics and Controls**
- Created and coded mathematical models in Matlab to analyze vehicle slip, braking, and vibrations

09/15–12/15 **Robot Mechanism Team Design Project, Passive Prosthetic Finger Mechanism**
- Designed a passive prosthetic finger for an amputee using a dual four bar linkage mechanism
- Utilized 3D printing to generate low resolution and alpha prototypes

09/15–12/15 **Visualization Projects Team Leader, Elements of Data Visualization Course**
- Rendered data from Oracle databases with visualizations created in R Studio and Tableau

Technical Skills

Proficient in Engineering Design, SolidWorks, CAD, Python, MatLab, LabVIEW, R, Tableau; *Experience* machining; *Basic knowledge of* C++; *Working knowledge of* Spanish

Awards/Leadership

HSF Anheuser Busch Scholarship Recipient
HSF ExxonMobil Scholarship Recipient
Theta Tau Kalv Scholarship Recipient
University Honors Spring, Fall 2015
LeaderShape Texas Graduate
Brave the Shave Cancer Research Fundraiser Theta Tau Team Leader

1336 Pullen Road, Rockwall, Texas, 75032 | 972-800-0994