**Nathan A. Riojas**

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**Summary** Highly motivated mechanical engineer passionate about software programming seeking to further the skills learned from computer science minor while utilizing engineering problem solving capabilities

**Education**

**Bachelor of Science, Mechanical Engineering May 2016**

Elements of Computing Certificate (Computer Science Minor) **|** Robotics Certification

**The University of Texas at Austin** **GPA 3.55**

***Related Courses:*** Software Programming and Data Structures, Mobile Computing, Data Visualization, Introduction to Programming with Python, Introduction to Computers and Programming Using C++, Vehicle System Dynamics and Controls, Engineering Design Methodology,Robot Mechanism Design, Dynamic Systems and Controls, Mechatronics

**Software Projects**

01/16–5/16 **MMAxCalc Mobile Application, Mobile Computing Final Project**

* Developed UI/UX for Android application that calculates punching power of user
* Leveraged SDK for Javelin Device wearable to read accelerometer data via Bluetooth
* Created SQLite database to manage user profiles and access past data

01/16–05/16 **Modeling and Simulation of Vehicle Behavior,** **Vehicle System Dynamics and Controls**

* Created mathematical models to analyze vehicle slip, braking, and vibrations
* Programmed models in Matlab to simulate performance and develop time plots of behavior

09/15–12/15 **Visualization Projects Team Leader, Elements of Data Visualization**

* Rendered data with visualizations created in R Studio using ggplot and Tableau
* Retrieved data from Oracle database to manipulate in R using SQL
* Developed a simple interactive web app using Shiny framework
* Managed team responsibilities and utilized SourceTree for version control with GitHub repos

**Experience / Additional Projects**

06/16–Present **Equipment Engineer, NXP Semiconductors**

* Maintained and improved robotic equipment operation in the chemical mechanical polishing stage

01/16–05/16 **Capstone Design Project Team Leader, Design of an Automated Wafer Handling System**

* Created 3 DOF robot from composite actuator systems for precise and accurate wafer handling

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

05/15–10/15 **Research Assistant, REWIRE Laboratory**

* Fabricated a gait rehabilitation robot using a 12 bar linkage mechanism for post stroke patients

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

01/14–08/14 **Maintenance/Reliability Engineer, The Dow Chemical Company**

* Conducted FMEAs in engineering teams for the main plant compressor and steam turbine

**Technical Skills**

*Proficient* in Python, MatLab, LabVIEW, R, RStudio, Shiny, Tableau; *Basic knowledge* of Sensor data acquisition, Linux, C++, HTML, JavaScript, SQL, Git *Working knowledge* of Spanish; *CodeCademy Skills*: Javascript, HTML and CSS, Ruby, Command Line, Git

**Awards /Leadership**

HSF Anheuser Busch *S*cholarship Recipient

HSF ExxonMobil Scholarship Recipient

Theta Tau KalvScholarship Recipient

University Honors Spring, Fall 2015

LeaderShape Texas Graduate

Brave the Shave Cancer Research Fundraiser Theta Tau Team Leader