

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