

Bruno De Hoyos

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Education

Bachelor of Science, Mechanical Engineering, May 2016
Elements of Computing Certificate
The University of Texas at Austin
Overall GPA: 3.75/4.00

Experience

- 01/2015 – Present **Undergraduate Research Assistant, ReNeu Robotics Laboratory**
- Developed a 3D graphics program to visualize human hand motion under a robotic exoskeleton
 - Created a wiki page to document project knowledge and facilitate future collaboration
 - Studied OpenGL computer graphics and anatomical models of human hands
- 06/2015 – 08/2015 **Global Rotational Development Program (GRDP) Operations Intern, Cameron**
- Applied Lean Six Sigma methodologies to identify improvement areas in pressure testing process
 - Created and deployed standardized pressure testing training documents to 30+ NAM facilities
 - Edited, narrated, and established a web-based safety training course for 750+ employees
 - Collaborated with engineering, marketing, HSE, and management teams to standardize processes
 - Composed and submitted financial justifications for two global \$25M savings projects
- 09/2014 – 01/2015 **Undergraduate Research Assistant, Center for High Energy Density Science**
- Designed, machined, and built support stands that increased optical table space by 10%
 - Assembled laser configurations and aligned optomechanical components on optical table
 - Worked in student machine shop to modify parts and track fabrication process
- 05/2013 – 12/2013 **Student Technician, Applied Research Laboratories**
- Performed data analysis and data processing of ocean database using MATLAB
 - Redesigned MATLAB GUI's to improve ease of use and functionality of backend code
 - Implemented test functions to ensure simulations produced correct results

Projects

Built a hardware and software toolkit to help visually impaired people perceive their surroundings
Designed and built a cam-driven robotic mechanism for displaying 3D content through a matrix of tiles
Developed a self-stabilizing, Arduino-based robot to practice principles learned in class
Established personal website to host my academic projects at www.bdehoyos.me
Reverse-engineered and replicated a working bicycle bell using SolidWorks and a 3D printer

Skills

Proficient in: MATLAB, C/C++ , Microsoft Office, Adobe Photoshop, CorelDraw
Familiar with: SolidWorks, LabVIEW, Tableau, Java, Git, Arduino, R, OpenGL, HTML, JavaScript, PHP
Fluent in Spanish, basic conversational French

Accomplishments

College Scholar, 2014 – 2015
University Honors, Fall 2012 – Fall 2015
Pi Sigma Pi Officer of the Year 2015
Darrel Royal Unrestricted Endowed Presidential Scholarship
Marvin Selig Endowed Presidential Scholarship in Mechanical Engineering

Organizations

Vice President External/Historian, Pi Sigma Pi Minority Academic Engineering Society (PSP)
Team Member/Contestant, UT IEEE Robotics and Automation Society (RAS)
Active Member/Mentor, Society of Hispanic Professional Engineers (SHPE)
Active Member/Volunteer, Tau Beta Pi Engineering Honor Society (TBP)