

# Rudy Medina Jr.

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## EDUCATION

Texas A&M University - Corpus Christi (ABET Accredited)  
Bachelor of Science in Computer Science  
Bachelor of Science in Mechanical Engineering  
Overall GPA 3.128

Corpus Christi, Texas  
May 2018  
May 2018

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## WORK EXPERIENCE

*Mechanical Engineer Intern, NVIDIA*

May 2017-August 2017

- Developed an automation system for assembling and updating 3D CAD family tables & instances in PTC Creo Parametric while using PTC Creo J-Link
- Designed a Stack Up Tolerance Analysis template to assist in the product design department to reduce manufacturing costs by increase output of future electronics. During this portion of the mechanical engineering process, the following variables were examined and taken into consideration: total part tolerance, comparison of available gap, performance limits, RSS, worst case, 3 sigma and 6 sigma.
- Developed and customized the engineering UI features within PTC Creo Parametric to help automate the mechanical engineering design work and PTC Windchill for CAD data management.

*Information Technology Co-Op Intern, Citgo Petroleum*

August 2015-May 2017

- Building and Implementation of Windows 7 images for servers, workstations, and applications across the organization utilizing Microsoft System Center Configuration Manager (SCCM).
- Automate IT operations and tasks with different scripting languages.
- Assist Technical Analyst with IT projects and provided help to the Desktop and Application support group.

*Information Technology Intern, Bradley's Motors*

May 2015-August 2015

- Installed, optimized and configure new servers and application.
- Introduced technological change into an organization that wanted to double in size.
- Performed management of software tools, software configurations, installations, and performed responsibilities of writing the functional specifications of software products and installation procedures (ROI and step documentation).

*System Administrator Intern, Nueces County CSCD*

January 2014-May 2015

- Manage infrastructure over 5 different locations, while assuring all services were properly secured.
  - Directed the implementation and performance of Windows infrastructure environment. Delivered a major upgrade improvement over old Windows server system that then catapulted productivity throughout the company
  - Performed security assessments, documented and presented to the Nueces County Director.
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## RELEVANT RESEARCH AND SKILLS

*Senior Design Project, August 2017 - December 2017*

- Retrofit a compact truck with a small diesel-generated configuration large enough to sustain a hybrid battery-capacitor power storage unit.
- The frame and wheelbase of the truck will be altered to create a 'reverse trike' powertrain setup
- An advanced electrical power control system will be integrated using a Raspberry Pi single board computer module. This microcontroller will regulate all input and output sources of power to the hybrid battery unit while displaying a digital cluster for MPH, and different power levels.
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*Remotely Operated Vehicle (ROV) Mate Competition, 2016-2017*

- It is designed to be an event that challenges engineers to apply the physics, math, electronics, and engineering skills they have learned to solve problems from the marine workplace/environment.
- ROV based on 5 key aspects Structural Support, Mobility, Actions, Distance, Interactions
- ROV currently consist of Arduino microprocessor, electrical wiring, motors, relay boards, switches, networking protocols, and C++ programming language.

**Programs:** AutoCAD, Pro Engineer (PTC Creo), PTC Windchill, AutoDesk Inventor, SolidWorks, Fastlook 14, SAP, MS Project, MS Excel, MS InfoPath, and Preforce

**Languages:** C++, C#, Batch, Python, Java, PTC JLINK, Bash, HTML, SQL, MATLAB

**Business Skills:** Project Management experience, Conduct 3<sup>rd</sup> Party proposal, Feasibility Analysis, Data Analysis and Statistics

**Machining and Welding Tools:** CNCs, mills, lathes, angle grinders, plasma cutters, oxy-acetylene torches, arc welders, band saws, grinders, shears, drill presses, chop saws, etc.