Raul Martinez Jr.

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Qualifications

- Familiar with Robot Framework intergration testing.
- Able to use git and Gerrit Code Review.
- Familiar with Microsoft Teams integration tools.
- Able to code in Python, Java, C, C++. Ruby.
- Research within deep learning neural networks.
- Able to implement a web site using HTML5, CSS3, JavaScript, Ruby, and Bootstrap.
- Familiar with the construction and design in computer hardware.
- Able to design integrated circuits using VLSI Cadence and testing with LVS and other embedded softwares.
- Familiar with the process and terminology of CIP standards and requirements within the Bulk Electric System.

Education

Masters of Science in Computer Science   *Edinburg, Texas*

University of Texas Rio Grande Valley, GPA: 3.60/4.0   *Expected: 2021*

Bachelor of Science in Computer Engineering   *Edinburg, Texas*

University of Texas Rio Grande Valley, GPA: 3.38/4.0   *Received: December 2018*

Experience

General Motors   *Chandler, Arizona*

EXCEL Software Engineering Intern   *June 2020 - August 2020*

- Worked with the OnStar Software Engineering team.
- Integrated Microsoft Teams app with Gerrit Code Review.
- Developed Python scripts to integrate testing keywords built into Robot Framework.
- Participated in Agile meetings and worked with General Motors test benches.

University of Texas Rio Grande Valley   *Edinburg, Texas*

Graduate Research Assistant   *January 2020 - Current*

- Identify and construct a process for side-channel attacking on blackbox model.
- Write a paper for publishing about the process with self-driving cars.

University of Texas Rio Grande Valley   *Edinburg, Texas*

Graduate Teaching Assistant   *September, 2019 - December 2019*

- Assist Electrical Engineering professors with student assignments.
- Instructor for Electrical Engineering lab courses.

The Anfield Group   *Austin, Texas*

Web Application Developer Contractor   *June 2019 - August 2019*

- Work in a team to expand development on a CIP and ERCOT internal web application using Ruby on Rails.
- Learn Security Compliance with Amazon Web Services.

Brownsville Public Utilities Board   *Brownsville, Texas*

NERC Compliance Apprentice   *August 2018 - May 2019*

- Work in a team to expand development on a CIP and ERCOT internal web application using Ruby on Rails.
- Designed workflows within the web application for BPUB CIP procedures.
- Designed a Responsibility Matrix that allows NERC coordinators and other related personnel to relate documents to their requirements for Compliance, SCADA, Power Plant, Electrical Engineering, Control Center, Substations and Relays.
- Mentored by Senior NERC Compliance Coordinators to learn CIP and ERCOT standards.

Brownsville Public Utilities Board   *Brownsville, Texas*

College Intern   *May 2018 - August 2018*

- Work in a team to develop an internal web application.
- Designed the front end of the web application using modern web standards.
- Generate positive results for on-time projects and use modern design layouts for current businesses.
- Expand communication skills with higher administration and group conversations regarding multiple discussions.

Projects

Robot Framework - Phone Lines Integration Script   *General Motors*

OnStar Engineering Team   *July 2020*

- Created a Python script with new keywords for Robot Framework.
- Tested keywords with a phone line modem and Skype phone and recorded results.
- Rebuilt OnStar robot framework project with new keywords.

Microsoft Teams - Gerrit Code Review Integration App   *General Motors*

OnStar Engineering Team   *June 2020*

- Learned the Microsoft Teams Bot framework to connect an adaptive card to Gerrit Code Review.
- Learned the Gerrit Code Review API to create a connector to Microsoft Teams.
- Created UML sequence diagrams for easy understanding of the project.

Computer Science Open Problems - Side Channel Attacking on Blackbox Model   *University of Texas Rio Grande Valley*

Computer Science Department   *January 2020 - Current*

- Construct the initial research process of deep neural networks in self-driving cars.
- Analyze self-driving datasets that can be computed by testing within known whiteboxes.
- Design a method for reading blackboxes then estimating whiteboxes for side channel attacking in self-driving cars.

NERC Compliance Web Application - NERCapp   *Brownsville Public Utilities Board*

BPUB NERC Team   *August 2018 - May 2019*

- Designed an application that would follow BPUB CIP procedures and allow for easier reporting.
- Designed a matrix that would associate BPUB procedure documents to their requirements.
- Designed a report generator that would simplify CIP-002 and CIP-004.
- Application was designed to cater BPUB responsibilities.

Summer College Internship Project - NERC Compliance Web Application   *Brownsville Public Utilities Board*

BPUB NERC Team   *May 2018 - August 2018*

- Designed a site that is easily manageable by NERC certified employees within the department.
- Programmed the application to run on Ruby on Rails and Windows Server 2016.
- Programmed an SQL database to store data and be filtered using community gems.

Computer Engineering Senior Project - E-Board (Electric Skateboard)   *University of Texas Rio Grande Valley*

Senior Project Course   *Spring 2018*

- Designed a drivable electric component modular to any common skateboard.
- Designed an iOS application able to control variable speed and detect current speed (MPH).
- Worked in a team of two to analyze problems and discover solutions.
- Managed the software development perspective of the project (iOS application and microcontroller).