Rubi Quiñones

2205 Moonlight Ln Apt #3 ▪ Edinburg, TX 78541 ▪ Cell: [956] 270-0385 ▪
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OBJECTIVE

To obtain a PhD in Computer Engineering and conduct research at the University of Nebraska-Lincoln [UNL] in the areas of:

- Big Data,
- Railway Safety,
- High-End Computing & Applications,
- Real-Time, Embedded & Cyber-Physical Systems,
- Self-Managing Computing Systems, and
- Machine Learning and Artificial Intelligence.

EDUCATION

Bachelor of Science in Computer Engineering — Anticipated Graduation Date:
The University of Texas-Rio Grande Valley, Edinburg, TX — **December 2016**
GPA: 3.38

Scholarships

- GM/EEOC Endowed Scholarship — **2014-2015**
- University School Presidential Scholarship — **2014-2016**
- STARS Scholarship — **2015-2016**
- Hispanic Scholarship Fund – Intel Scholarship — **2015**

Certifications

Certified Internet Web [CIW] Professional — **June 2013**

- CIW Network Technology Associate
- CIW Web Foundations Associate
- CIW Site Development Associate
- CIW Internet Business Associate

Adobe Certified Associate — **May 2012**

- Visual Communication using Adobe Photoshop CS5

Internet and Computing Core Certification — **November 2012**

- Computing Fundamentals – Global Standard 3
- Key Applications – Global Standard 3
- Living Online - Global Standard 3
- Computing Fundamentals – Global Standard 4
- Key Applications – Global Standard 4

Microsoft Office Specialist — **May 2011**

- Microsoft Office Word 2007

Certificates — **December 2013**

- AutoCAD 2014 Essentials: 01 Interface and Drawing Management
- HTML Essential Training

- Visual Basic Essential Training
- PowerPoint 2013 Essential Training

Languages

- English (Fluent)
- Spanish (Advanced)
- Korean (Beginner)
- Chinese (Beginner)

TECHNICAL ENVIRONMENT

Design:	MATLAB, CAD
Programming Languages:	C++, C, HTML, JavaScript, R, CSS, Python, Assembly, Verilog
Software:	Ionic, Cordova, Microsoft Visual Studios, Photoshop, Illustrator InDesign, Dreamweaver

LEADERSHIP

President, Association for Computing Machinery-Women [ACM-W] Spring 2016

- Organized an Open House event for The University of Texas-Rio Grande Valley to promote Computer Science and Computer Engineering to 50 incoming students.
- Coordinated the Coding Competition that was open to all high schools across the region to test their knowledge in Computer Science. Competition hosted 150 students.
- Judged robotics projects and mentored 500+ students from grades 3-12 in the F.I.R.S.T. Robotics Competition at P.S.J.A. high school in Pharr, TX.
- Outreached to 200 high school students in the region to pursue a degree in engineering at the McAllen Public Library's Major Fair.
- Lead Coordinator/Volunteer for the Ignite CS Project sponsored by Google to promote Computer Science and Computer Engineering to 25 middle school students at South Texas Preparatory Academy.
- Presented on the importance of outreach in technology during Tech Tuesdays, the region's outreach community for technology, open to the community.
- Organized the annual Girl Scouts Intro to CS Event at the University of Texas-Rio Grande Valley to promote Computer Science and Computer Engineering to 50 attendees.

Outreach Coordinator, Hack&&Make Spring 2016

- Lead Coordinator for The 1st Engineering Exhibit at Horizon Montessori. Exhibited engineering projects and group activities to 200 elementary students.
- Head Hacker for the 1st Annual Fiesta Hacks Hackathon at UTRGV.
- Organized a workshop open to the public on Android Development.
- Conducted study sessions open to the public about the book "Cracking the Coding Interview" by Gayle Laakmann Mcdowell.

ACADEMIC PROJECTS

Senior Design I, Genometric Sequence Analysis in Gene Mutation **Spring 2016**

- Created a website application using R and Shiny to get user input and display genetic mutations in a frageria vesca/ananassa.
- Advisor: Dr. Dongchul Kim at the University of Texas – Rio Grande Valley.

Monty Hall Problem **Fall 2015**

- Created a script in Visual Studios that runs the probability percentages of winning a car when the player switches doors and when the player does not switch doors through *n* number of games.

Monte Carlo's Approximation of Pi **Spring 2015**

- Wrote a program in Visual Studios that picks points at random inside the square. It then checks to see if the points are inside the circle. The program keeps track of how many points is in the square (N) and how many of those points fell inside the circle (M). Pi is then approximated using $\pi = 4M/N$.

Sorting a List of Random Numbers by Sorting Algorithm(s) **Spring 2015**

- Created a program in Visual Studios which takes user input of a list of size n of random numbers and the user is able to select the type of sorting method they would like to sort the items either by: Merge Sort, Selection Sort, Quick Sort, or Bubble Sort.

Palindrome **Spring 2015**

- Created a program in Visual Studios which takes user input and determines whether the word, phrase, or sequence is a palindrome.

Fibonacci Sequence **Fall 2015**

- Created a program in Visual Studios which uses recursion to calculate the nth number in the Fibonacci sequence.

Matrix Chain Multiplication **Fall 2015**

- Created a program in Visual Studios which takes a sequence of matrices and multiples them together efficiently by determining the order on to which the multiplication is being performed, not necessary the multiplication calculating itself.

Rotating LED Light Display **Fall 2015**

- Constructed a rotating LED light display that has an eight output state machine using J-K flip flops and a programmable logic device 22V10. The device will have a circular array of eight LEDs, which will be lit two at a time, either by one-step or two-step, depending on the user input. The lights will move either clockwise, counter clockwise, or a crisscross pattern.

Digital-to-Analog and Analog-to-Digital Converters **Fall 2015**

- Developed a microcontroller program to produce a stepped approximation to a given voltage waveform using the DAC by building and testing a digital-to-analog converter

using a resistor ladder network and an analog-to-digital converter using the successive approximation technique.

Assembler **Spring 2015**

- Wrote a command line interpreter using Sublime Text for the computer that will call a two-pass assembler for the SIC assembler language program.
- Pass one read each line of the source file, and begin the process of translating it to object code. It will create the symbol table. It recognizes the assembler mnemonics in addition to the directives and recognizes syntax errors.
- Pass two combined the information in the intermediate file produced by pass one together with the symbol table to produce two files – an object file and a listing file.

A Simple Shell **Spring 2015**

- Implemented an interactive shell program using Sublime Text that prompts the user for a command, parses the command, and then executes it with a child process.

EXTRA CURRICULAR PROJECTS

HackUTD Hackathon, Dallas, TX **Fall 2016**

- Created an application that used your smart phone's accelerometer to determine if a car crash has happened which will alert medical assistance for you along with a primary contact. The hackathon allowed the project to be completed in 24 hours.

BitCamp Hackathon, College Park, MD **Spring 2016**

- Created an IOS and Web application to make the judging process at hackathon's fair and efficient by making our own API on Devpost. The hackathon allowed the project to be completed in 24 hours.

HackTX Hackathon, Austin, TX **Fall 2015**

- Developed an android map that partners you with your perfect 'food' match. The hackathon allowed the project to be completed in 24 hours.

TAMUHack Hackathon, College Station, TX **Fall 2015**

- Programmed a pebble watch and android application that partners you with your perfect 'food' match. The hackathon allowed the project to be completed in 24 hours.

Code Red Hackathon, Houston, TX **Spring 2014**

- Developed an android karaoke application that allows two different audio clips from the same song to merge to become one collaborative song. The hackathon allowed the project to be completed in 24 hours.

RESEARCH

Roadway Travel Time Prediction at Highway Railway Grade Crossing **Summer 2016**

University Transportation Center for Railway Safety

Research Undergraduate Assistant – Software Engineer Intern

The University of Nebraska – Lincoln, Lincoln, NE

- Used Artificial Intelligence and Machine Learning to construct an algorithm that will predict the future time congestion range in a vehicle road or pedestrian walkway in a span of 10 weeks.

Interdisciplinary Approaches to Biomedical Data Science Challenges **Spring 2015**
Statistical & Applied Mathematical Sciences Institute [SAMSI] Innovations Lab
Research Undergraduate Assistant – Research Assistant Software Developer
The University of North Carolina, Chapel Hill, NC

- Created 3D modeling of vaginal bacterial to form statistical analysis and predictions of illnesses using R in a 1-week workshop.

The Polygon Division Problem **Summer 2013**
Howard Hughes Medical Institute [HHMI], S.T.E.M. Research Internship Program
High School Research Assistant – Applied Math Research Assistant
The University of Texas – Rio Grande Valley, Edinburg, TX

- Solved and presented the Polygon Division Problem using Mathematica within 12 weeks.

WORK EXPERIENCE

Certified Level II Tutor in Mathematics **2011 – 2016**
Mathematics Department & Learning Assistance Center
The University of Texas – Rio Grande Valley

- Tutored in the Fall and Spring semesters at 10 hours a week, and Summer semesters at 20 hours a week in all the listed subjects:
  - College Algebra,
  - Geometry,
  - Pre-Calculus,
  - Calculus I,
  - Calculus II,
  - Chemistry, and
  - Differential Equations.

Jump Start Mathematics Tutor **2011 – 2016**
Mathematics Department & Learning Assistance Center
The University of Texas – Rio Grande Valley

- Tutored in the Fall and Spring semesters at 10 hours a week, and Summer semesters at 20 hours a week to the incoming freshman students in Intermediate Algebra and College Algebra with office hours as a Teacher Assistant.

Digital Graphics Designer **2013-2014**
Information Technology Department
The University of Texas – Rio Grande Valley

- Created advertising banners and logos for technology updates for the university.

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