

Carlos Cabada



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EDUCATION

The University of Texas at El Paso (UTEP)

Bachelor of Science in Computer Science

M.S. Software Engineering with Concentration in Secure Cyber-Systems

Program GPA: **2.96/4.00**

Expected Graduation Date: May 2021

Expected Graduation Date: May 2022

PROFESSIONAL EXPERIENCE

NASA NIRO UTEP Center for Space Exploration Technology Research (CSETR)

Student Research Assistant – Software Engineer

August 2020 – Present

- Responsible for improving and adding features to a data visualization web application that is built in Angular JS and ASP.Net.
- Responsible for managing AWS EC2 instances and acted as System Administrator.
- Responsible for leading code reviews and administering a bitbucket and JIRA account.
- Responsible for integrating 2 factor authentications using Twilio Authy to a web application.
- Responsible for integrating and maintaining 2 Mongo databases to feed a data visualization web application.

UTEP Enterprise Computing (IT)

Undergraduate Assistant - Quality Assurance Engineer

February 2019 – August 2020

- Responsible for testing custom ASP. Net applications to mitigate risks and communicates results to technical and non-technical colleagues.
- Provided technical assistance in troubleshooting and correcting performance problems; responded to inquiries regarding errors, problems, or questions.
- Responsible for black box testing web applications. This includes functionality, Cross-Browser, layout, authentication, authorization, front end validation and back end validation

UTEP College of Engineering – K-12 Outreach

ExciTES Summer Institute Coordinator - Engineering Ambassador

January 2018 – August 2018

- Planned and executed successfully, with a budget in mind, 1-week different engineering curriculums for 3rd-11th graders.
- Created and Reviewed the schedule for ExciTES 2018.
- Worked with 13 ExciTES interns, and delegated modules to be exposed to students.

TECHNICAL EXPERIENCE

Java

- Natural Language Processing (NLP) – Developed an algorithm that sorts a database of 400,000 words using their similarity embeddings.
- Expanded the NLP algorithm to cluster similar words using a disjoint set forest and heap, given n unions and m words per set.
- JavaFX Application, Price Finder, used MVC model, saves an item's details and calculates the price change percentage.

Python 3

- Wrote a script that uses the Sha256 hashing algorithm and uses brute force to find passwords from a given text file with usernames, salt values, and hashed values.
- Wrote a script that automates the process of looking up users in a video game leaderboard (Fortnite, PUBG).
- Wrote a script that uses the Open-CV to detect faces and then sort them in folders for each person.

C

- Developed a packet sniffer using the pcap library, this had filtering functionalities.
- **Linux shell** - Developed a user shell for a Unix operating system. It mimicked some of the behaviors of the bash shell.
- **Snake** - Developed a snake like LCD game for the MSP430. I used several libraries like timerLib, p2SwLib, lcdLib, and shapeLib.
- Developed a Tokenizer that had a history function that would store previously tokenized strings.

PHP

- Developed a system for a supermarket, in which user inputs name and PLU for every shipment, adding onto the store's inventory.
- **CAHSI** - As a team, classmates, and I, developed a system for a CAHSI, in which user Administrators and Advocates were able to create reports of students' demographics. We used MySQL to store data, and PHP for the backend of the application.

SKILLS

- Proficient Python3, Java, JavaScript, HTML, CSS, MySQL, C, PHP
- Working knowledge of Angular JS, ASP.NET, Bash, Prolog, Haskell, Selenium.
- Bilingual in Spanish and English (Verbal and Written).

Leadership and Activities

• ACM Vice President 2020-2021

- Led and prepared virtual workshops for about 20-30 student members.
- Currently assisting the ACM chairs in planning of the Hack915.
- ARL South Hackathon (July 2020) – Capture the Flag Event – Learned about several security issues, and how to fix them.
- HENNAC Hackathon (2019). – Capture the Flag Event – Learned about steganography, encryption, decryption, and data forensics.