# Karim Kabbara

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### **EDUCATION & CERTIFICATIONS**

Bachelor of Science in Computer Science with a Certification in Cybersecurity and Secure Computing. *University of Colorado Denver* 

**May 2023** *GPA: 3.56/4.00* 

**NVIDIA DLI Certification: Building Intelligent Recommender Systems.** 

November 2022

CompTIA Security+ (SYO-601)

June 2023

### **SKILLS & LANGUAGES**

**Skills**: Python, Scripting, C++, Qt Framework, Java, JavaFX, Bash, MySQL, Kali Linux & Ubuntu, Wireshark, Git, Object-Oriented Programming, Multi-Threaded Socket Programming, AWS, GCP, Django, HTML, CSS, JavaScript, Embedded Systems (Arduino). **Languages**: English (Fluent), Arabic (Native), French (Beginner).

#### **PROJECTS**

### **Brady Public Humanities Archive (Visit:** <u>bradyhumanities.org/</u>)

- Collaborated with a team of 3 to create a website that functions as an archive for world-wide humanities projects for a client, a Spanish humanities professor at The University of Minnesota.
- Technologies used include AWS LightSail to provide a VPS, Nginx paired with Gunicorn to run the web server, Django for the web development framework, and Amazon's RDS to host the MySQL database.
- Functionality included account creation, submitting projects, verification process, and interaction with the MapBox API to place project pins on a map.

## **Directory Manager**

- Created a directory management system that allows an organization to separate employee access to information by assigning users to directories relevant to their position.
- Administrator functionality includes allowing administrators to start/stop the server, create new directories, and add/remove users from directories.
- Client functionality allows users to sign in and select a directory that they have been added to, and depending on permissions, users can create, modify, and delete folders & files.
- This application was written in C++ using the Qt framework to handle the Server & Client GUIs with user and directory information stored in PostgreSQL database.

## **Tournament Management System**

- Used Java, and JavaFX to create a system that allows for the management of a soccer tournament through an administrative application and viewing tournament details through a user application.
- Administrator functionality includes adding countries, teams, and players, and creating matches and their lineup.
- User functionality includes viewing all the lineups, matches, and teams in the tournament.
- Built the system using a multi-threaded server to allow administrator applications or general user applications to connect simultaneously.

#### **Port Scanner Detector**

- Wrote a python script that can be used to detect port scanners to prevent malicious machines from scanning a network.
- Analyzes network traffic and detects port scanners by using a listening socket to capture packets traveling through the network.
- Packet headers were dissected to extract source & destination mac addresses and IP addresses.
- Used unique source/destination IPs and ports, stored in a first contact table, to calculate fanout rates to detect source ports that exceeded a threshold of scans over a time interval.

# PROFESSIONAL EXPERIENCE

# **University of Colorado Denver**

Denver, CO

Cybersecurity Teacher Assistant (Temporary Position)

January 2023 – May 2023

- Worked closely with a professor to design and develop two classes for the new Cybersecurity major offered at CU Denver. The classes developed were Computer Security, and Secure Networking and Programming.
- Development included researching and gathering textbooks that align with the topics of each class, creating labs that challenged students to think outside the box, and homework assignments that introduced the fundamentals of each topic.
- Topics included introduction to penetration testing, SQL injections, cloud VM setup (GCP), packet capture and analysis, hashing and cryptography, as well as input validation.

**Target** 

Parker, CO

Fulfillment Expert

October 2020 - Present

• Responsible for picking products around the store in a timely fashion. Products are bagged and stored efficiently to allow other team members to quickly deliver the products to the guest or packaged to be shipped to customer homes.

Best Buy
Sales Expert
Parker, CO
February 2019 – August 2020

• Provided in-depth solutions and recommendations by asking clients open-ended questions to understand their needs. Solutions mainly involved computers, tablets, home theater setups, and associated peripherals. (Soundbars, printers, etc.)

Assisted clients with products they already own by troubleshooting the cause of the problem and finding a solution.