

Karim Kabbara

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EDUCATION & CERTIFICATIONS

University of Colorado Denver. GPA: 3.54/4.00

Bachelor of Science in Computer Science with a Certification in Cybersecurity and Secure Computing.

NVIDIA DLI Certification: Building Intelligent Recommender Systems.

Denver, CO

In Progress: May 2023

November 2022

PROJECTS

Port Scanner Detector

July 2022

- Wrote a python script that can be used to detect port scanners to prevent malicious machines from scanning a network.
- The script analyzes network traffic and detects any port scanners. A listening socket was used to capture packets traveling through the network. Packet headers were dissected to extract source & destination mac addresses and IP addresses.
- Unique source and destination IPs, and ports were stored in a first contact table. The first contact table is analyzed to calculate fanout rates. Source ports that exceeded a threshold over a time interval were flagged as port scanners.

Tournament Management System

October 2022

- Created a management system that allows for the management of a soccer tournament. This system can be used to track the progress of the FIFA World Cup 2022 or any future tournaments. This system was created using Java and JavaFX.
- Administrators can add countries, teams, and players, and create matches and their lineups. Users can view all the lineups, matches, and teams in the tournament in a separate JavaFX application.
- The tournament system is hosted on a multi-threaded server that allows administrator applications or general user applications to connect to it. The application identifies itself to the server so that the server controls access to functions.
- To prevent race conditions, concurrency is taken into consideration in this system by synchronizing all data modification.

Brady Public Humanities Archive (WIP, Visit: <http://44.229.176.110>)

November 2022

- Our senior design team created a website that functions as an archive for Spanish humanities projects. Our client, a Spanish professor at The University of Minnesota, requested a way for professors and users to submit humanities projects to a digital archive and view other projects on an interactive map.
- Technologies used include AWS LightSail to provide a VPS, Nginx paired with Unicorn to run the web server, and Django for the web development framework. Amazon's RDS is used to host the MySQL database.
- Users can create accounts and submit projects to the archive. These projects are placed on a map as markers. When hovered, the markers show relations to other projects by category. When clicked, the markers lead to a page containing details about the project. Users may also use the search bar to find projects by keywords.

Directory Manager

December 2022

- Created a directory management system that allows a company to separate employee access to information. Employees may be assigned to a directory and cannot access different directories' information. The application runs using a local multi-threaded server that allows clients within the same network to remotely connect to it.
- The server application allows administrators to start/stop the server, create new directories, and add/remove users from directories. When added to a directory, users are given certain permissions for that directory. Administrators can also view system details such as all users, active users, and directory details.
- The client application allows users to sign in and select a directory to work on. The user can only see the directories that they have been added to. 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. User and directory information is stored in an SQLite database.

PROFESSIONAL EXPERIENCE

Target

Parker, CO

Fulfillment Expert

October 2020 – Present

- Responsible for finding and 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.
- Packaged merchandise and worked with UPS and FedEx to ensure products were safely shipped out and delivered on time.

Best Buy

Parker, CO

Sales Expert

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.

Walmart

Parker, CO

Electronics Associate

August 2017 – January 2019

- Responsible for assisting customers with questions about electronics, and for stocking products on the electronic salesfloor.
- Ensured that returned products were legitimate by checking serial numbers and other product information.

SKILLS & LANGUAGES

Skills: Python, C++, Qt Framework, Java, JavaFX, Bash, MySQL, Kali Linux & Ubuntu, Wireshark, Git, Object-Oriented Programming, Multi-Threaded Socket Programming, AWS, Django, HTML, CSS, JavaScript, Embedded Systems (Arduino).

Languages: English (Fluent), Arabic (Native), French (Beginner).