ABDUARRAHEEM ELFANDI

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Technical Skills

Programming: Python, C, C++, C#, JavaScript, PHP, R, x86-64/y86-64 and 65c816 assembly

Database & Web: MongoDB, HTML, CSS, and AJAX.

Tech: Docker, Docker-Compose, Git, Unix, Unity and VSCode

Languages: English and Arabic

Projects

Fight! (GitHub) April 2022 – Jun 2022

- Implemented character physics, moves and interactions along with animation controller.
- Worked in a team environment consisting of two other people, where I organized meetings, entrusted tasks, and helped debug teammates code.
- Used: **Unity, C#.**

Brevet Time Calculator application (GitHub) Oct 2021 – Nov 2021

- Designed web application using **Flask** micro web framework for the server side and **jQuery** and **AJAX**.
- Stored inputted data in database using **MongoDB** and displayed when requested.
- Built a **REST API** which exposes the resource, which can return all open and close times in the database or open and close time individually and can be queried to display the top k open and close times specifically.
- Designed a consumer program using **PHP** to use the service that has been exposed.
- Used **Docker-Compose** to define and run multi-container applications.
- Used: **Python, PHP, Docker, Docker-Compose and JavaScript**.

Stock Prediction with machine learning (Code available upon request) May 2021 – June 2021

- Used existing learning models to determine whether a stock is beneficial to buy based on previous data.
- Evaluated six learning models (SGM, SVM, decision tree, K-NN, ridge regression, and logistic regression) and their performances based on the tuning of hyperparameters and the predicted accuracy on the training and test data set.
- Worked in a team environment consisting of two other people, where I organized meetings, entrusted tasks, helped debug teammates code.
- Wrote report about our findings and the differences in accuracy in all of the six learning models used.
- Used Scikit-learn library for different learning models.
- Used: **Python**.

DDoS-Detect in Linux Subsystems (GitHub) Feb 2021 – Mar 2021

- Leveraged a Pre-existing PCAP extractor (STEELISI MIMIC) and then uses its output to generate traffic flow from multiple clients to multiple server connections on two separate machines in an isolated (Host-Only) network.

- Created a closed network traffic generator that will serve as a sandbox to test DDoS attacks and DDoS detection solutions on.
- Worked in a team environment consisting of two other people, where I organized meetings, entrusted tasks, helped debug teammates code.
- Used: **C++**.

Rap-Analysis (Website) – (GitHub) Oct 2020 – Nov 2020

- Worked in a team environment consisting of two other people, where I organized meetings, entrusted tasks, helped debug teammates code.
- Built a Rhyme Detection analysis framework and webservice for Hip-Hop/Rap Lyrics.
- Designed web application using **Flask** micro web framework for the server side, jQuery, and **AJAX**.
- Implemented Spotify integration where users can log in with their Spotify account and allow playlists and recently listened songs to be analyzed.
- Used LyricsGenius python library which is a library that runs on a combination of the official Genius API and web-scraping tools to collect lyrics for over 100 artists.
- Designed most of the website and layout and deployed on Heroku.
- Used: **Python, HTML, CSS, and JavaScript**

Publisher-Subscriber System (Code available upon request) May 2020 – June 2020

- Implementation of a publisher and subscriber system.
- Used synchronizing and multi-threading using a rounded buffer implementation.
- Resulted in an HTML which contains captions and URLs to photos to a specific topic where the subscriber gets the published posts depending on the topic they have subscribed to.
- Wrote a full detailed report about the code and everything related to this project.
- Used: **C and HTML**.

Experience

- Part of ONRG, working on democratizing the use of machine learning in networking and maintaining data privacy among collaborators. Sept 2022 – Present

Education

University of Oregon

- Bachelor of Science, Computer & Information Science Sept 2018 – June 2022
  - GPA 3.67
- Master of Science, Computer Science. Sept 2022 – Sept 2023

Courses Completed: Computer Organization, Data Structures, C/C++ and Unix, Algorithms, Operating systems, Principles of Programing Languages, Computer & Network Security, Intro to Artificial Intelligence, Machine learning, Software Methodology AI in Production, Software engineering, Computer Networks, and Game Programming.