Samer Khatib

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EDUCATION

University of Florida Gainesville, FL
GPA: 3.87 / 4.00 B.S. in Computer Engineering Expected Graduation: May 2024
Involvement: Association for Computing Machinery, Software Engineering Club, Competitive Programming Club, Solar Gators, Google Student Development Club

SKILLS

Languages: C++, Python, Java, JavaScript / TypeScript, HTML5, CSS3, Dart, Go, Ruby on Rails, SQL

Tools: Flutter, ReactJS, Angular, Git, Docker, Kubernetes, npm, pip

EXPERIENCE

Cisco Meraki – Software Engineering Intern - *vMX & MR Dashboard Teams* May – August 2023 & May – August 2022

- Created a new *API endpoint* using **Ruby on Rails** to download binary device blobs and configure device characteristics of a Wireless Access Point by converting rows from a **PostgreSQL** database into a **Comma Separated Value (CSV)** format
- Developed a **Go Package** to format the output of the command-line tool to optionally output in an **ASCII Tabular format** or *serialized* JSON
- Designed & Built a **Hashicorp Terraform** Provider to access the **Meraki Dashboard** using the *Terraform Plugin Framework* to simplify the deployment of **vMX Devices**

University of Florida Solar Gators – *Telemetry Lead* March 2021 – February 2022

- Developed web application (**JavaScript**) to retrieve telemetry data from vehicle such as GPS location & velocity
- Displayed contents of retrieved data in real-time on dynamic map using *Google Map's JavaScript API*
- Cached collected telemetry data from each run in **MySQL** database using **Node.js** framework module
- Trained team members how to contribute to development using **Git** Version Control & **ClickUp** Task Control

DigiConnect LLC. – Software Engineering Intern – *Front End Infrastructure* May 2021 – August 2021

- Launched *native* third-party client application for several social networking sites using **Swift (iOS)** & **Java (Android)**
- Migrated native application code base into a shared language *(Dart)* using Google's **Flutter** Software Development Kit
- Overhauled Website UI using **ReactJS** for graphical adjustments with a data pipeline built on **Apache Spark** & **Firebase**

PROJECTS @ (www.github.com/skhatib07)

VaccinApp - COVID-19 Vaccine Site Locator ***C++, Python, JavaScript***

- Finds nearest vaccine locations to the user using the user's current GPS coordinates & displays them on a map
- Retrieves vaccination site metadata from The *Socrata Open Data API* & current location from the *HTML Geolocation API*
- Collects historical data on previous vaccination queries in **JSON** format, sorting the data using a **PostgreSQL** table

YOLO-ALPR - Automatic License Plate Detection & Recognition ***Python, C++,* pip**

- Detects & isolates a vehicle & vehicle's license plate in a live video stream using Ultralytics **YOLOv5** architecture
- Analyzes detected vehicle to identify physical characteristics of the vehicle (color, make, model)
- Reads & saves license plate number using Google's **Tesseract** optical character recognition (OCR) engine
- Stores image of vehicle in an Amazon **AWS S3** container & identified information in an **SQLite** database

Myoelectrics - Natural Robotic Hand & Actuation ***Python, Java, C++***

- Takes raw inputs from forearm muscles of user using 2 *MyoWare electromyography (EMG) sensors*
- Raw inputs are passed through & filtered using Weka3's **Sequential Minimal Optimization (SMO) regression**
- Degree of finger actuation is classified after filtration using a Multi-Output Convolutional Neural Network with **Keras API**
- 3-D printed model of hand is actuated using 6 separate SG90 Micro-Servo Motors powered by 5 Volt 3 Amp Power Bank

AWARDS

Intel Excellence in Computer Science Award March 2019, February 2020
Awarded to top student project in the Computer Science Category at the Florida State Science and Engineering Fair

Regeneron Science to Medicine Certificate of Recognition March 2019
Presented to student with research improving modern medical technology at Florida State Science and Engineering Fair