Samer Khatib

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EDUCATION

University of Florida Gainesville, FL
B.S. in Computer Engineering Expected Graduation: May 2023
Involvement: Association for Computing Machinery
Competitive Programming Club, Solar Gators, Software Engineering Club

SKILLS

Languages: JavaScript / TypeScript, HTML5, CSS3, Python, Dart, Java, C++
Tools: Flutter, React, Angular, Git, Docker, AWS, npm, pip

EXPERIENCE

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 **React** for graphical adjustments with a data pipeline built on **Apache Spark** & **Firebase**

University of Florida Solar Gators – *Telemetry Lead* March 2021 – Present
- 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
- Teach team members how to contribute to development using **Git** Version Control & **ClickUp** Task Control

PROJECTS @ (www.github.com/skhatib07)

VaccinApp - COVID-19 Vaccine 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 one student with the top 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