Roy Ataya

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Vancouver, BC, Canada

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Skills

Programming
C/C++, Python, MATLAB, Swift, Apex, T-SQL, SQL, C#

Tools
Jira, Git

Frameworks
SwiftUI, UIKit, Core Data, MediaPipe/BlazePose, Apex test framework

IDEs
Xcode, Visual Studio, Visual Studio Code, CLion, PyCharm, IntelliJ IDEA

Operating Systems
Linux (Ubuntu, WSL), Windows, macOS

Education

Bachelor of Applied Science Systems Engineering,
Simon Fraser University
Sep 2017 – Aug 2022
Burnaby, BC, Canada

Certificate of Genomics,
Simon Fraser University
Sep 2015 – Apr 2017
Burnaby, BC, Canada

Bachelor of Science Molecular Biology and Biochemistry,
Simon Fraser University
Sep 2011 – Apr 2017
Burnaby, BC, Canada

Professional Experience

Developer Intern, *Salesforce - Traction on Demand*
Jan 2021 – Aug 2021 | Burnaby, BC, Canada

- Designed and implemented a login and account setup feature using **Apex**; enhancing customer satisfaction and site usability.
- Created comprehensive unit tests using the **Apex testing framework**, to enhance product quality and catch bugs; resulting in 92% code coverage.
- Collaborated with technical consultants and clients to improve message board comment system using **Apex**, improving customer experience.
- Refactored 2 code bases into modular packages, improving efficiency.
- Developed code to consume REST APIs.

Research Engineering Assistant, *Simon Fraser University*
May 2019 – Aug 2019 | Burnaby, BC, Canada

- Designed a custom PCB using **EasyEDA** based on an Arduino UNO microcontroller and Arduino Ethernet Shield, in a team of 2.
- Implemented **C++** & **Python** software packages, allowing website control of the Arduino UNO via the internet.
- Developed encryption/decryption scripts to enhance data security, for the website and the custom PCB, by 100%.

Projects

macOS Recipe App
Dec 2022 – Present

- Developing a macOS application with **Swift** to enable creative culinary experiences, allowing users to store and randomly select recipes.
- Designing an intuitive user experience by creating a Graphical User Interface (GUI) through **SwiftUI**.
- Implementing persistent storage using **Core Data**.

Body Stress Inference
Aug 2022

- Created a motion capture tool to recognize hazardous poses, applying **Python**, **Unity** and ergonomic standards in a 3-person team.
- Established real-time data capture with **Mediapipe**/**BlazePose**.
- Developed an analytical tool utilizing the REBA process to measure stress levels and recommend necessary changes, with a 95% accuracy.
- Rendered user's motions on a **Unity** rig model, with colour-coded joints indicating various risk levels.

Scoliosis Brace Optimization System
Jan 2022 – Aug 2022

- Worked in a team of 6 to win the ICAMES 2022 engineering competition Best Project In General Award.
- Led the electrical team to design a custom PCB for our firmware to run on and to control the pressure sensing system, using **EasyEDA**.

Deepfake Detector
Sep 2020 – Dec 2020

- Trained a deep learning model, in **Python**, to detect deepfakes of human faces using co-occurrence matrices, in a team of 3.
- Achieved a 90% accuracy on fake images, 94.6% accuracy with real images and total accuracy of 92.3%.
- Utilized **numpy**, **Keras**, **Tensorflow** and **OpenCV** to develop the model.