Aswin Visva

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github.com/aswinvisva

SKILLS

Programming Java, C++, C#, Python, PowerShell, Swift, R
Web HTML5, JS, CSS3, SASS
Libraries TensorFlow, OpenCV, NumPy, Scikit-learn, Pandas, Matplotlib

WORK EXPERIENCE

Software Engineering Intern - Computer Vision | PinchVR Inc. May 2019 – August 2019

- Developed an Android NDK script in C++ to handle native camera acquisition and created an algorithm to dynamically set exposure parameters, such as shutter speed and sensor sensitivity, minimizing motion blur and thereby **improved tracking accuracy by 30%**
- Developed a framework in C++ to test the tracking algorithm, outputting the tracking accuracy and CPU performance
- Implemented multi-threading in Android phones with quad-core processors **improving CPU performance by 10%**
- Developed API's to perform native activities such as measuring CPU usage using Android SDK and Android Studio

Software Developer Intern | Process Fusion Inc. July 2018 – August 2018

- Developed multiple PowerShell scripts to perform health checks on specific applications and address identified gaps such as logging events, verifying TCP ports and checking application turnaround time
- Created XML files to store data such as employee emails, IP addresses, TCP ports and websites

PROJECTS & ACTIVITIES

StuTours | Hack the North 2019 September 2019

- Developed a mobile app in Unity and C# leveraging REST APIs to help incoming students' book university tours, receive optimized routes and read articles about their favourite schools
- Implemented the Google Maps API to optimize routes and the Azure Bing Search API to receive related news articles

ConvoBuddy | QHacks 2018 February 2019

- Built a hat equipped with a Raspberry Pi microcontroller connected to a camera and developed an IOS app to help individuals with Autism maintain eye contact and identify the emotions of others during social interactions
- Used the Google Cloud Vision API to determine the emotion and position of the individual and wrote the data to a Firebase Database, which was displayed real-time in an IOS app along with tips to help the user improve conversational skills
- Won **Best Use of Google Cloud Platform** at QHacks 2019

BikeSafe Helmet | U of T Engineers Without Borders 2018 November 2017 – May 2018

- Created a bike helmet leveraging the OpenCV library and the Haar Cascades machine learning classifier to detect cars on the road and warn the user when they approached too closely
- Earned **1st place prize** at the U of T Engineers Without Borders competition and a **bronze medal** at the 2018 Toronto Science Fair

Sign Language Glove | Toronto Science Fair 2017 November 2016 – April 2017

- Created a glove with a partner that translated 30 sign language gestures to speech using Java and Arduino
- Won a **gold medal for Best Senior Project** at the 2017 Toronto Science Fair

EDUCATION

University of Waterloo September 2018 – May 2023

Bachelor of Applied Science: Management Engineering Co-op

- Relevant courses: MSCI 240 – Algorithms & Data Structures