Curriculum Vitae

Jaiaid Mobin

About Me

I am working as a senior software engineer in BJIT Ltd. I have worked in developing computer vision and deep learning based solution for client project. Currently working in PC application development.

Contact Information

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- **Personal Website :** https://jaiaid.github.io/

Links

Github https://github.com/Jaiaid

Publications Google Scholar

Linkedin link

Work Experience

- Software Engineer
  - BJIT Ltd., from July,2018 - October,2020
- Senior Software Engineer
  - BJIT Ltd., from November,2020 - Present

Tools I have used in Personal/Academic/Professional projects

*Each category items are listed in descending order of usage frequency

•**Programming language :** Python3, C++, C, Bash, C#, Java, javascript, x86 Assembly(fasm), php

•**Programming language :** Linux(Ubuntu), Windows10

•**Framework :** Laravel5, Codeigniter

•**Machine Learning/Vision Development Tools:** OpenCV, Scikit-learn, Tensorflow, Keras

•**H/W Development Platform :** Arduino, Raspberry PI

•**Build system and Deployment tools :** Make, Docker

•**Networking Tools :** Packettracer, Wireshark

Professional Project Work

- **Directshow Source Filter Development**
  - Repurposed code from existing MIT licensed project to create a source filter
  - Analyzed requirement of our project and capabilities of directshow source filter to report what is feasible and accordingly influenced application architecture
  - Implemented simple IPC mechanism to facilitate communication between COM component and application
  - Worked on application backend to interface with custom source filter using C++ (MSVC++14) and C#(.NET 4.7)
- **Device Control Based on Computer Vision**
  - Developed Windows application using C++/CLR and VS2015
  - Developed simple custom solutions based on computer vision algorithms using **OpenCV** API to do particular object presence detection for application use case scenario and showed their effectiveness using client provided dataset
  - Implemented object detection system in **C++** using **OpenVINO** sdk for **Windows10** based application
  - Implemented relay control over tcp in **C++** using windows networking library and knowledge from the relay documentation
- **Smartphone User Detection**
  - Collected Data and trained machine learning model inspired from a given paper in **Python3.6** using **numpy, scikit-learn** package
  - Implemented simple communication over http protocol locally to connect front end code and backend ml inference using **flask, json** packege
- **Content Based http/https Traffic Filtering**
  - Implemented local cache in **C++** using **sqlite** library in **Windows** client PC**(Windows10)**) application
  - Written simple **javascript** for browser based control panel of client PC application

Academic Project Work

- **Sign Language Translator :**
  - Implemented gravity corrected gyroscope and accelerometer value reading system from **MPU6050** breakout board using https://github.com/jrowberg/i2cdevlib/tree/master/Arduino/MPU6050 library to interface with Arduino mega
  - Created a representation of the needed movement to indicate 17 signs
- **Obstacle Detection and Surface plotter :**
  - Written code for a depth measurement system using **HC-SR04** sonar sensor controlled by ATmega32 microcontroller
  - Implemented a plotting mechanism on 12864ZW LCD screen to depict the 2d surface topology
- **A Cineplex Management Web Application**
  - Written backend code in **php5 on Laravel4**
  - Database implementation for **Mysql** DBMS

Education

- **B.Sc. in Computer Science and Engineering** Dept. of Computer Science and Engineering, Bangladesh University of Engineering and Technology (BUET).
  Graduation Year - 2017, CGPA - 3.57

Other Accomplishments

- Bangladesh-Japan Engineers Training Program(BJET) 2nd batch (March,2018-May,2018)
- ITEE FE exam March 2018 Top Scorer among ITPEC countries (Examinee no FE01-0081)