

# Yaroub Hussein

White Oak, TX || (903) 353 – 5546 || yaroubhussein@gmail.com

## EDUCATION

### Texas A&M University

Bachelor of Science, Major in Computer Engineering

Minor in Cybersecurity and Mathematics

GPA: 3.86 / 4.0

College Station, Texas

Expected December 2023

### Texas A&M University at Qatar [Study Abroad]

Concentration in Computer Engineering and Mathematics

Doha, Qatar

January 2022 – May 2022

Relevant Courses Computer Science (Python, C, C++), Operating Systems, Computer Architecture and Design, Statistics, (Abroad) Microprocessor System Design, Machine Learning

## PROJECTS

### Classification of Fruit and Their Decay State

March 2022 – April 2022

Group Research Project

- Developed an image classification machine learning program that identified the type of fruit and whether it is rotten. Tested overall performance between three algorithms (CNN, SVM, & CNN+SVM).
- Utilized Python to code project. Used confusion matrices, ROCs, and Training/Validation plots to analyze overall performance of each algorithm.
- Concluded CNN is more efficient, consistent, and accurate with image classification machine learning.

### Client-Server using IPC Mechanism

September 2021 – October 2021

Individual Project

- Developed a client program that connected to a given server utilizing IPC mechanism (Pipe, FIFO, Message Queue, Shared Memory). Program can transfer data, file messages, and create new channels. Server hosted electrocardiogram data points for patients. Client has access to retrieve the datapoints.
- Utilized C++ to code project & concluded the fastest IPC mechanism for this program is shared memory.

### Single-Cycle ARM Processor and Control Unit

September 2022 – December 2022

Individual Project

- Developed a 32-bit single-cycle ARM processor on a Raspberry Pi 4. Each individual component (ALU, Sign Extender, Adders, Mux, etc.) was developed from scratch and then combined.
- Utilized Verilog, C, & ARM assembly lang. to complete a successful embedded system that is a CPU.

## LANGUAGES, SKILLS, & ACTIVITIES

**Languages:** Fluent in English; Proficiency in Arabic and American Sign Language

**Technical Skills:** Python, C++, Verilog, ARM assembly, Machine Learning Image Classification, iOS, macOS

**Activities:** Institute of Electrical and Electronic Engineers, TAMUmake, National Speech & Debate Association

## LEADERSHIP & INVOLVEMENT

### Freshmen Reaching Excellence in Engineering

College Station, Texas

Development Committee Counselor and Member

August 2019 – May 2021

- Coordinated mentorship program with over 50 mentors and 80 freshmen & created a 50% improvement.
- Utilized professional communication to organize final exam review sessions by department leading professors for freshmen engineers.

### Student Engineers' Council

College Station, Texas & Doha, Qatar

International Ambassador

January 2022 – Present

- Utilized and established professional communications between SEC in United States and SEC in Qatar.
- Allocated resources to SEC in Qatar to improve overall program development.
- Coordinated international events hosted by SEC to increase student engineer engagement.