IDME is an app that my friend and I developed in high school. The app was written in JavaFX and it was submitted to the Congressional App Challenge, which we ended up winning in our district. The aim of the app is to facilitate taking in class attendance by using the barcodes in our I.D. tags and a scanner to instantly and effortlessly take attendance as soon as the student walks into the class. This not only increases class time by 15%, but it also adds a new level a security to the school that it didn’t previously have before. This is because the app would record every students clock in time to each class which allowed us to better keep track of every student’s whereabouts. With this app in place, teachers can get straight into the lecture right as soon as the bell rings.

For my Computer Science 312 class on Computer Organization I designed an 8-bit processor that is capable of matrix addition in Logisim. For this project I had to design an Arithmetic Logic Unit, a register file, and a decoder. I then used this in conjunction to the ROM and RAM provided by Logisim to create the processor that could interpret my very own assembly language. This assembly language includes commands such as jump, comparison, multiplication, and many more commands that a basic assembly language would include. These commands are then encoded into hexadecimal so that the processor is able to interpret the commands correctly. I then used these basic commands in order to create a program that was capable adding two matrices together. With these commands we can create various programs which can include for loops, while loops, and comparisons. With the backbone of basic programs, we can create even more complex programs and algorithms.

I think that it is very important to give back to the community. More specifically, I think that it is important to help our youth reach their full potential, which is why I have volunteered through SHPE at Jones Elementary to help with their STEM club. This program is aimed to get elementary school kids excited about engineering through STEM. I helped coordinate engineering related activities, as well as touring kids through the A&M campus, all in the efforts to inspire the next generation of engineers. I believe this to be very important because one day the next generation is going to take over and I think it is very important that they are prepared from a young age for all the challenges that might arise in the future.

SpiderBot is a project that I work on outside of school with 4 other teammates for the T.U.R.T.L.E Robotics Club. The aim of this project is to create a remote-controlled robot capable of scaling and traversing walls and ceilings in the hopes that we can use this to inspect all types of surfaces including, but not limited to, airplanes, pipes, and building infrastructure. We are in the early stages of the project as we are testing what is the best gap height to have the highest force to stay on a wall with a prototype that we 3D printed ourselves. Out goal for the end of the semester is to get a working prototype that is capable of driving on a wall or ceiling, then our goal would be to finally traverse corners so it can travel from one wall to another. Another goal for this semester is to get this project approved for the senior design project requirements for our respective majors.

Based on the suggestions ﻿﻿﻿﻿of peer review, I updated my portfolio to include more of the projects I have worked on that are included on my resume. I then also separated the about me tab into two sections which include details about me and what I do specifically in computer science, and more about myself like hobbies and interests.