I have always been interested in programing, I started with basic web development in early middle school. Quickly I my interest transitioned from websites to more controls and robotics based programming. Early high school I bought a Arduino and raspberry pi along with breadboard and electronics kit. I have been building different bots that drive around in different fashion and in different control methods. Some are line following bots, some just drove until the bumped into something, others were remote controlled. When I got to JMU I naturally was very interested in the robotics minor. Had there been an option of an controls/automation engineering major I would of most likely taken it. Since that is not an option I am taken the general engineering major with minor in robotics. I took this class based on the description given on myMadison. My expectation for this class where set by the official explanation and description provided here is a short snippet, "*Introduction to computational thinking and formal logic. Students create software to solve problems in applied science, business, and engineering taking social context into account*." I expected this class to cover different approaches, along with examples possible case studies for each design method or approach example. As per the description, I was expecting to work developing software in a broad field of topics (applied science, business, and engineering). While I did not have specific set learning goals from this class, I was just expecting to be presented and thought different approaches and new examples of programming and problem solving. I'm a self-thought programing, with this I was hoping this class would be able to show new techniques and methods for programming. Most of the tutorials I followed were what was provided for learning Github. I have used Github before this class, by I did not have a solid understanding of how it worked, and given that I always worked on projects by myself I never really used Github. Now that I was required I set up a new account, and took the time to properly learn how to use the CLI commands, what they mean, and what are best practices. While I am not the most practiced in using Github, It definitely makes a lot more sense now then when I started this class. Outside of this class, I spent varying amounts of time programming. At the beginning of the semester I spent close to 10 hours a week roughly, working on a rock-paper-scissors game. Then remade the game so it would be programmed in a "functional" method instead of a "linear" method. Over the course of the semester I spent a significant amount of time programing in a program called ArcGIS for spatial analysis for engineering capstone project. While programing in this program is not the same kind of development we were supposed to cover in ISAT 252, it still requires much of the same approaches. Depending on the week, I spent as much as 20 hours a week in ArcGIS with the average probably closer 5-7 hours a week. I think the biggest takeaway from this class I had was in writing programs using a functional approach instead of linear. This is shown in the two versions of rock-paper-scissors that I made. I feel as I was able to really participate in class discussions while we had in person classes. I always try to be attentive and participating in class, and I believe I was able to do well in that regard this class. But I feel as I was not able to learn the broad field of topics that was presented for this class. Given that im not an ISAT major I was not aware that this class is focused on figuring if you like programming in general, nor was that hinted at in the description. While I completely understand that a class like this is important for many people to explore their interest, I just wish I knew this before I started this class. My biggest failure this semester I believe was not utilizing the available expertise of the professor to help with outside projects. But this is also do to the limited amount that I worked on my own projects this semester. I was working on a driving bot during spring break and after a bit which I did consult the professor with the best methods for handling web sockets for streaming commands and video between the web server, clients, and the bot itself. The programming and developing that I was doing for ArcGIS I am working with

faculty from engineering and geoscience, they are the people that I reached out to first when I ran into difficulty.

JMU's mission statement is "educated and enlightened citizens who lead meaningful and productive lives." This class had many interesting topics discussed in class, which I do believe showed me certain perspectives from a new point of view that I had not had other way. But I do not believe this class falls under the "productive" category for me. Spending multiple weeks writing a fully tested FizzBuzz program, while it is a good introduction for those that have never done it. I was very interested in how the problem was set up and approached, by going though and writing every line in class I do not believe is the best use of time. Again, I understand that this kind of class structure is important for many people, which I fully agree with. But I did not find it useful for me. At the beginning of the semester I was intrigued by the badge system. I still think that is a very interesting way of handling grades, and wish the semester was not cut short to have fully experiences the system. Overall I feel this class helped structure my understanding of programming. Test driven development is very strong and robust development approach that will produce good results every time. While I might of not spent as much time as I should of this semester using this method due to an extremely busy class schedule, I will definitely be taking this forward with me to apply in the future. This semester I worked with many great students and wonderful faculty among multiple disciplines at JMU which helped strengthen my understanding of programing and my understanding of what I want to purse in engineering.

This semester was a crazy semester, for all of us. For me as well, I am a transfer student, because of this I am taking the engineering human-powered-vehicle project at the same time as working on a capstone project so I can still graduate in four years. This made this spring semester extremely busy with manufacturing the HPV and working on a capstone that is extremely cyclical and weather depended. This is what was going on even before JMU transitioned online because of COVID19. Because of this I was not able to give as much time for this ISAT class I should of towards the end of the semester. But I still believe I absorbed as much of the material as possible. At the end of this class I am able to confidently answer the three questions given to us at the beginning of the semester. Do you like programming? Do you think you could be good at it? Do you see yourself doing programming in the future? I have always enjoyed programming and this class only reinforced this. Since I am self-thought I might not follow the best practices, but I know with time and practice I could pick it up and improve. I had a controls engineering internship last summer, and it is something I see myself doing in the summer. While I am more interested in different aspects of programming, I definitely see myself writing code for the short and long term future. Overall I believe I deserve a grade ranging from B+ to A-.