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ISAT 252

Personal Narrative

Coming into ISAT 252, I was originally a bit skeptical about my ability to program. I had attempted to learn various languages such as Java and C++ in the past and found myself struggling to keep up with the content provided by free courses. I lacked a drive to get into the programming world. I had a lot of resources at my fingertips, but without motivation, I found that I just wasn’t interested in programming at all – in fact, I felt like I was awful at it.

When I signed up for Programming and Problem Solving, I had to put myself in a learning mindset. Again, I was less-than-thrilled to try to dive back into programming, despite being someone who’s familiar with computers. However, I set a few goals for myself. First, I wanted to reach a higher level of competency in writing code. My ideal goal was to write a web scraper using BeautifulSoup as an extension of Python, as it was a tutorial I saw on YouTube when the class first started. This meant learning how to use Python from scratch, but I was entirely willing to put the time and effort into something if it meant learning a new skill for a class. I wanted to apply the web scraper to the JMU parking system to run analytics, maybe as part of a project or an app in the future. By setting the bar high, I hoped to hold myself accountable. Secondly, I wanted to branch out and see if I could learn the basics of Java. I am probably not the only person to take interest in Java because of its use in video games (Minecraft), but I had some exposure to it from free courses online. Finally, I set a personal goal of being accountable to myself. While it sounds cliché, it was a way for me to finally own up to my own shortcomings in programming – to sit down, write code, and fix code – over and over and over again, even if I didn’t feel like it.

So, I started working on code, mostly outside of class. I’m a very hands-on learner, and so I set my desktop up in my apartment with two monitors so I could watch a tutorial and code at the same time. I purchased a Python course on Udemy, which I have sunk 50-75 hours into at this point. While it is easy to say that I learned quickly at first, I think the entire experience was a challenge for me. It has not always been easy for me to ask for help, but when you are part of an online community, it can be easier to ask without feeling embarrassed. Comments on videos were extremely helpful to me, as I learned a lot about developer tricks and shortcuts for menial tasks that helped me speed up my coding. I customized Visual Studio Code to make text more readable, as well as to highlight strings, Booleans, and other inputs in a color-code that I could remember. Additionally, I started working with Project Euler, for which I have done a few programs on my own, though walkthroughs did help me where I could not figure it out. Finally, I just started writing code for myself. I wrote some code to help me crank out Physics equations faster, which definitely helped me during the online semesters to check my work.

My goals changed rather quickly as the online semester started kicking in. Stress levels went up, and I found that I was dedicating more and more time to Physics, simply because trying to learn the complexities of all the equations online was proving to be much more difficult than I thought. As the difficulty ramped up, I realized I had to divert some of my much-used programming time to start memorizing the application of equations and other important things to make sure that I would pass my exams. This is to say, I was not sure if I would fully get to a level of familiarity with Python and Java that I had intended at the beginning of the semester. I felt a little upset at the idea of not completing my goal of writing a web scraper by hand, but I remembered what you said in the beginning of the year – not everyone writes their own code by hand anymore. Many people borrow and edit from other people, but it is understanding what the code means that counts. So, I shifted my goalposts, and I moved to understand code, rather than to crank it out day in and day out. While I didn’t forgo writing code completely (it is necessary to continue practicing), I took a more comprehensive stance on how I wanted to learn it. Instead of just following tutorials, I started to see patterns of how different expressions were used.

In these patterns, I found success. I wrote a code that enables a user to play rock-paper-scissors without the use of a tutorial. I created a program to check if a user fulfils certain requirements in order to gain entry to the data within. Basic logic games were a lot of fun to write and mess around with, but I also used programming to help me digitalize equations that I had to use in Physics, such as calculating total resistances of circuits and running generator equations. Fizzbuzz, a project that was a challenge at first, seemed easy by the time I had started to familiarize with these other programs. I also found success in the idea that programming was fun – it was a challenge, but a welcome one. Puzzles are enjoyable, so long as I can find some help when I get truly stuck. Finally, I joined up with a mod-making team for the video game Stellaris, in the form of the Better Events Mod. Working with some developers really got me into the programming mindset, as they shared some tips and tricks for modifying existing structures.

My shortcomings, on the other hand, are a few. I had some scheduling issues as a result of the classes moving online, and thus it became a bit of a struggle to deal with keeping on track with everything that I wanted to accomplish. Moreover, I wish I had put more time into the class at the beginning of the year, or that I had purchased my Udemy course sooner. As I said, I am a hands-on learner, and I like to work with code frequently in order to learn. Coding exercises helped me a great deal, but again, I wish I had worked with them more seriously in the beginning. It was my greatest shortcoming that I did not engage in coding as reliably as I could have. Balancing stress between classes has been difficult, and I admit this has been a major difficulty throughout the entirety of the year, let alone in the final stretch of the semester.

But I have methods of dealing with these failures, and I do not intend to let them remain failures. Everything I have listed above, whether it be a regret that I did not fully realize how much I enjoyed programming, or if it was my subsequent gaps in programming that hindered my ability to learn – these things are correctable. With summer comes much more free time that I can devote to fulfilling my goal of learning how to use a web scraper for the first time, or to finally get a feel for Java. At the heart of my corrections, however, is learning how to better balance time under duress, a skill that must be learned rather than simply applied. With more experience, however, I believe that it is possible.

I believe that taking this class and being held accountable for producing code has made me a more productive and enlightened citizen. I’ve discovered a fondness for programming, something that I absolutely intend to pursue in the coming semesters and perhaps even professionally. I have gained new insights as to how good code is to be written, along with test-driven development, and how teams collaborate on projects across the board. The class has opened my eyes to the possibilities of integrating coding with work that I already do in the classroom and has given me a chance to demonstrate my ability at using computers. Finally, I have experience collaborating on a project as part of a team, which I enjoyed greatly. Our mod was published and featured in the PC Gamer magazine’s Top Mods for Stellaris.

As I look at my successes and failures, I believe I deserve an A in ISAT 252. This semester has been extremely unorthodox, but I have managed to branch out and delve into the world of programming. I have found that I do enjoy programming, and that with time and maintenance, I can be good at it. Getting involved in coding as part of a class was an extremely rewarding decision that has paid off immensely, and I am proud to say that I took the opportunities offered to me in the development world to further my knowledge and understanding of software development. While there are areas that I could have improved or done better during the semester, I want to take them in stride. I want to learn from the mistakes that I made, the times that I had to reorganize my schedule and put off programming, and learn how to better balance my time. Moreover, I want to code more – I want to get more involved and to better understand the systems at work behind the computer.