To whom it may concern,

My name is Harrison Paxton and I am writing to share my experience of my independent study, Rocket League Bot. This project was a semester long and involved learning about video game programming in order to create a bot that could play the video game Rocket League on it’s own without input. The code was done in Java and used a framework that implemented it into the game using the official Psyonix API, Psyonix being the game developers. The objectives of the project were to address all aspects of the software development lifecycle that I have learned about in my previous semesters at FGCU and implement them all in an individual project. Those steps included requirements, design and testing. Additional assignments included a game programming essay to address what I had learned on the subject, a learning report to demonstrate my ability to gain and apply new knowledge, and the code itself. This semester also presented the unique circumstance of a global pandemic which was definitely a huge obstacle but one that I feel I satisfactorily overcame. The pandemic mainly presented an issue for my main classes as all instruction was moved online and none of my groups were able to meet in person as everyone had gone home for the semester. We were able to work through these difficulties though. Because this course was an independent study, it didn't change too much in and of itself, but it was affected nonetheless. Getting acclimated to the new reality of the semester required a lot of extra work and effort for many of my other classes and this project took a back seat for a little bit. This was not so much of an issue due to the fact that it is being done at my own pace anyway but now at the end of the semester I am seeing the repercussions of that. The pandemic was unexpected and something of an extenuating circumstance and hopefully it is something we won’t have to encounter again anytime soon. Regardless, it still taught me the importance of staying on top of everything to the best of my ability because it is impossible to know when some unforeseen circumstance could come into play.

Despite the circumstances, I still found this project to be successful in both teaching me and preparing me for real world engineering situations. The added difficulties this semester, in my opinion, emphasized some of these things for me. I have had to make ethical and professional decisions within the context of this semester as a result of those difficulties. In a certain sense, the pandemic presented very interesting information to me in regards to how it not only affected our school but many workplaces both locally and globally. I saw a wide variety of reactions from various leaders and although some were differing it was still very insightful as a whole and something I will take into consideration in situations where informed judgements are necessary in my life. It also provided me insight from an engineering perspective as with the ventilators situation as many huge corporations with manufacturing capabilities came together to help produce makeshift ventilators. So while I would’ve preferred no pandemic, it did proved me extra insight in global, economic, environmental, and societal contexts that I may have lacked otherwise and that is something that will definitely stick with me for the rest of my life.

Although this project was an individual one, I was completing it in which I had three other semester long group projects. These projects were my Senior Software Development project, Software Testing project, and Software Maintenance project. Through these experiences both this semester and in previous, I have learned how to successfully work in a group environment both in software and other areas. I have had experience as both a leader and as just a general group member. In this Rocket League Bot project I have even learned how to be more of a leader when it comes to holding myself accountable and being responsible for what needs to be done when no one else is involved. Being a part of so many group projects has provided me with communication skills and planning skills. It can often be hard to work around the schedules or multiple group members, especially while in college, but nonetheless constant planning and communication with group members is essential for any group project. As discussed earlier, this semester with the pandemic presented additional issues which I had to overcome. But aside from that I have also experienced issues in groups when it comes to lack of participation. Luckily it was resolved with the help of my professors before it got too out of control but it was a challenge keeping myself motivated and on track in spite of the difficulties, and I am glad myself and other group members were able to work through it in that specific scenario and meet our objectives for the project.

One of the things that I think is a good quality of mine that has helped me, not only on this project but on all my groups projects this semester, is my ability to acquire and apply new knowledge as needed. Whenever I undertake a new project or problem to solve, it is not because I am already comfortable with the material, it is because I’d like to learn more about it. And this project is a perfect example of that. Rocket League is one of my favorite video games but before this semester I had no idea how video game programming or even how Rocket League itself worked underneath. One thing I really enjoy about programming is how this skill can be applied. In my schooling I have learned primarily Java but have also undertaken projects in Python, Dart, or C++. Prior to these projects I had no knowledge of these languages but through my general programming knowledge and information I had acquired about methodologies, concepts, algorithms etc, I was quickly able to find out exactly what I needed to know to complete these projects. I think this is something that is common in the work field for software developers as well. When getting a new job you may not have experience with all the tools you’ll need to use but the intuition and aptitude to learn these new tools is what is really important and I think in my years at FGCU this is something I have become familiar with doing. And even in general, for all classes it is something I have applied and I am proud of my ability to do so.

I hope this letter was insightful into the experience of my independent study as well as its context within this semester at FGCU. While this has overall been a tough experience with everything going on, I still enjoyed this project a lot and will take what I have learned as a result of it with me as I move on in school and in life.

Sincerely,

Harrison Paxton