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Senior Design Reflective Essay

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A Look Back at Two Years

This past year of senior design work has, in the least, been a little bit of a struggle. To begin this project, we were all happy and excited about the great work we would be able to do. Everyone saw a point in the end when our project would be something new that we had created, and something helpful. In the end, with what we finished and were able to accomplish, I was happy. However, I believe it could have been much better and that there are many ways in which it could be improved.

During this project, I believe that I was provided a sense of what real world responsibility is like. Our group had two people who did the majority of the planning. Drew and I were the group leaders in a sense. Our direction helped me realize how, in the real world, a team most likely works. Some people may excel or do a larger amount of work while others may not provide the effort or skills you would hope and expect. Also, like in the real world, we had to jump hurdles. When limitations arrived, we worked around them. If certain information or materials cannot be obtained you must compromise. Otherwise, one must proceed on a new route. I believe, even with the limitations we encountered, our project did end up being particularly successful. Still, in an ideal world (and for an ideal product), all team members contribute 100 percent.

When the group originally received and looked over the project we were a bit dismayed. The project seemed to be centered around programming, which at first glance would have been a better fit for the software engineers or computer science majors. Many people on my team did not have much programming experience, therefore making some aspects of the project a struggle. We had to gather our knowledge and learn entirely new things from one another. The skills required for this specific assignment were somewhat separate from what we had learned throughout our other schooling. Yet, I believe much of the information we learned will provide a base of knowledge for our future endeavors.

The senior design project has been a lesson to never believe you’ve learned enough. In the real world, this idea is not only applicable but also imperative to advancement. Cooperating as a group, though not always the most desirable option, is also necessary. Together, our minds can explore more options more efficiently. Each member of every team can encounter personal obstacles. Working with others, we can more easily see how to overcome limitations in new ways. Seeing how others critically think spawns more imaginative paths of problem solving. In the real world workforce, I won’t be spoon-fed answers. The coursework over this past year has taught me to utilize resources on my own to find answers while also meshing with my peers.

In a basic sense, this project integrated the university’s hope for a liberal education. Simple writing abilities are required for the reflections; Communication is essential to operating cohesively; The nature of our project required learning about the inner-workings of a field very different from our own. Miami University’s goal in administering a liberal education, I believe, is to have students graduate as well-rounded individuals. While group projects always encourage well-roundedness, this project did especially so in that each member had to branch out in some way. When we encountered issues obtaining data, we expanded our skillset. To even begin the assignment, we versed ourselves in basic hospital procedures. To pass on information among one another, we learned to discuss clearly and concisely.

I absolutely think we conducted our project in a professional manner that resembled an industrial environment. We held meetings as a team in a conference room almost weekly. This is where we updated each other on progress. Here, we also went over what our next steps would be as a whole. Deadlines were created for each of us to complete certain material. Sometimes, extensions were necessary due to problems and road blocks that we faced, but this happens in professional settings as well. When all were not able to meet as a team in the conference room, we had conference calls. As needed, we met as a team to combine each finished piece and to work on the project together. I found the business-like manner in which we conducted the project to be effective but would like deadlines to be adhered to more closely.

In this project we had to have the ability to identify, formulate, and solve engineering problems. Our group communicated with hospital staff to collect information for the application. We used a google drive to hold all of our information and files we created throughout the semester. The system we designed had to communicate perfectly with everything in order to work. We had to modify this system and make changes at times. The majority of the first semester was spent designing this system and figuring out the correct network for our project. We ended up with a LAMP server which held all of our information and applications. Matlab, the server, the database, the web files, Ubuntu, and our IOS application all contributed to making up our system. When this system was done, we then used it to analyze and interpret data. Matlab ran. With the results Matlab gave us, we were able to see how well our algorithm was optimizing the medical information we were given.

As an engineer, we must have a range of technical skills which solve a variety of issues. The project mirrored skills that an everyday modern engineer would use. We had to set up and use a LAMP server which is a fairly common server set up. Matlab is also commonly used. Matlab involved combining previously learned information and newly learned information to complete our goal.

It satisfied me to know that our project solved a significant, contemporary issue – hospital wait times. Our application works to optimize these wait times, thereby allowing more patients to be seen in a more organized way. This not only helps the hospital to save money and improve overhead costs, it also helps to save time on the patient end of the spectrum by allowing those in need to be helped quickly.

I am glad to say that I have learned a lot throughout the senior design project. Furthermore, I believe our entire team has as well. Still the learning will never be over. To solve new problems, we will have to continue to study and better ourselves. I do believe our project was a success in that this knowledge will not go to waste. We did have our disputes as a team, but as a unit, we gained valuable skills and life lessons that will support us in a professional atmosphere.