

Antonio Palmeros

Professor Jason Sawin

CISC Senior Capstone 480

18 May 2022

Final Paper

My name is Antonio Palmeros, I am a student at the University of St. Thomas who is graduating with a Bachelor's degree in Computer Science. As a Computer Science student, I have had to participate in rigorous coursework that has forced me to constantly improve and adapt to the new technologies that I will have to use in the near future. I have learned many new skills and gained much experience throughout my four years in my field of study. I have taken some of the projects that I have completed during my time here and will reflect on not only why I am proud of these projects but also how they connect to the common good. I will also explain a problem that is of interest to me that is not only common, but also a problem that I personally have seen first hand and how it has affected me. These projects helped me overcome these problems and I will go in depth into how.

Starting off with an overview of my accomplishments during my four years at the University, I have completed many different projects for a wide variety of courses that have allowed me to gain a more fundamental and in depth knowledge of Computer Science. Everything from a simple mock calculator program to fully interactive website applications that many people would love to use. Two examples of these projects can be seen in my portfolio. The first one is a project using assembly language that was very commonly used before modern programming languages were created. The second example is another project that I developed

using a very modern and robust language called JavaScript. I used this and many other different technologies to create a fully interactive website application that maps out the location of crimes that have been committed in St. Paul, Minnesota with lots of additional details. Outside of technology and computers, I have worked on lots of other projects and assignments that have allowed me to open myself up mentally to other ways of thinking that have greatly improved my critical thinking and problem solving skills. Not only that, but it has helped me follow in St. Thomas's mission of having Intellectually Catholic inspired students that will be moral leaders who use their skills to advance the common good. I wrote an essay on why there is evil and suffering in the world if God exists. I also go in depth into passages of scripture that paint a better picture on why this might be the case and what many of us are followers of the Catholic faith can learn from.

Starting off with my first project, In my Computer Architecture class, I created an assembly language program that could take some input list of numbers and do all sorts of different things with it such as sorting, addition and subtraction. This sounds like a very simple program but creating it in assembly language was something that really made this project challenging. I essentially had to figure out how to develop this program from scratch with only a few tools at my disposal. It was a very memorable project because it allowed me to develop the skills needed to become an effective problem solver without much aid. I had to research and practice with these tools quite a lot. In regards to St. Thomas' mission this project stood out as the thing that greatly improved my critical thinking for not only this assignment, but also any other problems that I have to solve whether it is in my personal life or in my career down the road. I now possess the knowledge to be able to take a very complex and difficult problem and

work my way through it as best as I can with the limited resources that I have and that I believe, is a very valuable skill that everyone could find very useful.

The next project listed in my portfolio was definitely my most favorite project of all my courses because it not only taught me so much new technology and skills that I will need in my career, but also how to work within a group and how a potential team works in a professional setting. I also really enjoyed the topics and I believe that this is one of the courses and projects that has made me way more competitive in the job market. This project was called the St Paul Crime Map. I completed this project in my Web Development course which was one of my favorite classes in the CISC department. The application could dynamically and interactively show you what types of crimes were committed in a certain area based on your filter setting and gave you all sorts of details used by the publicly available police report database. I used many different popular web technologies that were popular among the professionally made websites and I had to also figure out how to use them using the resources available to me. The main difference here was that I had to work together with a group of people to achieve this goal. I had to make sure to divide the work up based on people's skills and interests which forced me to improve on my deadline and time management skills. This allowed me to gain invaluable communication, teamwork and cooperation knowledge that are crucial needs in my career going forward.

Finally, I will talk about my essay that I wrote for my Evil and Suffering in Theology course. I chose this essay to put into my portfolio because I thought it was the most interesting and thought provoking essay I have written during my time at St. Thomas. I go into detail on how different ideas of what evil and suffering actually meant throughout history for people and scholars alike. Starting out, I had a very closed minded thought about what evil and suffering

was and it was simply that, just pure evil and suffering. However, when I began to do further research and look throughout different academic and theological sources I began to find ways and methods that others used to view this way of thinking and how they could see that there is a deeper explanation for these words that are thought to only bring pain and sadness. As a Catholic myself I also wondered why there had to be these things where God was a benevolent and all powerful being. With this dilemma in mind, I was able to be more open minded and really try to accept other points of view on this issue. After writing the essay I was able to really believe and side with another perspective. This is really important to me because I realized how easy it could be to just ignore certain opinions and views of different people and groups. I think that going forward I will be way more open minded and it will only benefit me in the long term with the relationships I make whether they are professional or personal.

The University of St. Thomas mission statement is as follows: *“Inspired by Catholic intellectual tradition, the University of St. Thomas educates students to be morally responsible leaders who think critically, act wisely, and work skillfully to advance the common good.”* With this in mind, all of these projects have successfully allowed me to follow in this mission and even go above and beyond it. With all of the helpful experiences that I have gained at this college, I have been able to be a very productive and effective member of society now and for the foreseeable future. When looking at my assembly language and web development project, I have gained hard technical skills as well as skills that many others don’t think about when going through the process and I think those are more important than the hard skills I gained alongside them. That covered the critical thinking and wise acting of the statement. In addition, I was able to use what I have covered in this paper to get a job using my education to make and help people’s lives improve by giving them more comfortability and overall better health by being

privileged to be part of a team that creates medical devices. I believe I have successfully achieved advancing the common good not just for the community of students that have been alongside me but many others as well.

One major issue that I have personally seen many other graduates of Computer Science face is that the general courses in their curriculum lack the diversity of technology that they are introduced to. Of course there are many electives that have a solid amount of skills that they teach students but many times not enough compared to something like a coding bootcamp. In my job search experience, while many employers see a Computer Science degree as a good enough prerequisite. There are still many who would like to see experience in industry standard technical skills. Coding bootcamps almost always emphasize these skills. This is another reason why I chose my two projects for my portfolio. These projects very elegantly taught me fundamental programming knowledge but also industry standard technical knowledge which is why I was able to be more confident in myself and my abilities when entering the job market. As for the papers and essays that I have written, these only improve my abilities to communicate and express myself as well. These softer skills have also helped me become a more well rounded individual.

In all, I believe that my projects showcased here have been the result of how I have developed my skills in the field that I am studying here at the University of St. Thomas. I attribute these projects to making me competitive in the job market with how much knowledge they have provided me with and lastly, I believe that due to my education here I have also been able to succeed in the school's mission statement and overall advance my path towards the common good.