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CISC 480-02

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Signature Work Reflection

The three projects represented in the portfolio paint a broad picture of my undergraduate experience at the University of St. Thomas. Each assignment shows a different area of study related to my major as well as my minor. Hug the Angry Jarvis represents my earliest taste and appreciation for the power of computer science. The Tommie Coin project encapsulates my interest in cryptocurrency and emerging technologies. The "Into the Bobiverse" paper blends my passion for computer science with my love of computer science. Ultimately, these three together show how my love for computer science and philosophy have grown and give a glimpse into how I intend to work for the common good in my personal and professional life.

Hug the Angry Jarvis comes from my second computer science class, CISC 230: Object Oriented Design and Programming. Before this class I only had a basic grasp of how computer science was used in the modern world. I had a rudimentary understanding of the fundamentals, but this course opened my eyes to the power and versatility of computer science. It taught me a fresh way to think about problem solving and gave me the tools to solve problems using computer science. This project represents the culmination of that course. It showcases the four principles of object-oriented design: inheritance, polymorphism, abstraction, and encapsulation.

While the program is simple, it gave me a taste of the power of computers and catapulted me into this major for good.

I used some of the principles I learned in CISC 230 in later classes, namely CISC 410: Advanced Information Security. One of the units in this class focused on cryptocurrencies. Our final project included coding a basic cryptocurrency wallet that could interact with Tommie Coin, a fictional, centralized, cryptocurrency used to teach the basics of cryptocurrency. The Tommie Coin wallet was the largest project I had done since Hug the Angry Jarvis. While coding the project, I enjoyed learning about the potential benefits of using cryptocurrencies. I also was shocked by the potential downsides of these currencies. A main benefit of cryptocurrency is the potential for increased privacy around monetary issues. There are two main drawbacks to it, the processing power required is enormous, causing environmental issues, and the added privacy makes it a powerful to for shady actors.

"Into the Bobiverse" covers several of my favorite subjects. I wrote the paper for my Summa Cum Laude examination. The paper explores the topic of artificial intelligence and what is means to be human. I chose this topic for two reasons, the book I recently read sparked my interest and the topic presented a perfect crossover between my major and minor subjects, computer science and philosophy. In writing the paper I was able to use the analytical skills I had honed through my many studies of philosophy. I was also able to apply them to my favorite subjects, computers, and artificial intelligence. The paper presents an analysis of the being of Bob. It utilizes the concepts of the common good to show how if it unclear whether Bob is

human, we must treat him with dignity and respect. For the examination, I had to defend my conclusions well expanding upon the core concepts in the paper. It was an excellent opportunity to hone my understanding and explain my reasoning.

Each of these three components blend to give a clear picture of my future goals. I intend to use the skills I have learned in computer science to make the world a better place. Hug the Angry Jarvis gave me a passion for computer science along with a set of tools that can be used to advance the common good. It taught me the basics of object-oriented design and honed my critical thinking skills. In my job, I use these skills every day. I work as a software engineer for Pearson, a textbook publishing company and assessments deliverer. I work on a team that handles all our desktop software for administering exams for everyone, including future doctors, nurses, teachers, engineers, and real estate professionals. Our Java-based code follows the same principles that I learned in CISC 230. The skills I learned through this course allow me to deliver high-quality code to our candidates allowing for the best possible testing experience. I use these skills to make their world a better place.

The second assignment informs my personal life. There is currently much interest around cryptocurrency and their ability to make the world better. The code that I wrote for this project gave me a deeper understanding of how these emerging technologies work in the real world. Too often education can focus on the theoretical, this assignment informed me on the practical. I am more cautious about cryptocurrency since coding this project. I am aware of the potential dangers that unregulated currency can have. It presents an amazing opportunity for privacy, but along with that, it gives criminals an untraceable way to extort money from unsuspecting

victims. Along with my concern about the less desirable uses for cryptocurrency, I am also concerned by the effect that these cryptocurrencies can have on the environment. The enormous amount of processing power it takes to process transactions on the blockchain presents a serious environmental concern. Each transaction requires huge amounts of computing power that uses large amounts of energy. This energy often comes from unclean energy sources. My desire for easier access to cryptocurrency cannot be realized until our society moves away from polluting energy sources.

Lastly, my Summa Paper gives insight into my personal and professional life. Professionally, the paper gives me a deeper understanding of what it means to be human. By examining the situation of Bob, I learned to appreciate the variety of experiences that different people have. This gave me a deeper compassion for people who are different from me. I bring that into my work every day. I am better able to think about the candidates who use our software as people, not just as faceless users. This understanding makes me a better programmer. I have a deeper appreciation of the needs of our candidates, both our regular test takers as well as those with disabilities. We do a tremendous amount of work for our candidates with disabilities. After writing this paper I appreciate and value the experience of these candidates. I can code for them with a deeper understanding of the problems the face.

Personally, this paper made me understanding humanity on a deeper level. I am more compassionate to the people that I live with, and I am more likely to serve in every area of my life. I am interested in learning more about artificial intelligence and the effects that it can have on the human experience. I want to be able to continue to blend my knowledge of computer science with my philosophy studies. I want to teach those around me about what I have learned, and I also want to learn more from the people around me. I want to have deep discussions about

what is means to be human. I crave a deeper understanding of the human condition and I want to apply that to my everyday life.

I am very grateful for the topics I have studied the last four years at the University of St. Thomas. As a freshman I was unsure of the path my life would take. I had a small interest in computer science because of those around me, this interest soon blossomed into a deep passion and love for the subject of computer science. That love coupled with my passion for philosophy has given me well rounded education. I can look at problems from two very different perspectives. Philosophy and computer science both taught me to think, and problem solve in different ways. The blend of the two subjects has given me the skills and tools I need to continue to advance the common good in my personal and professional life.