

Thinh Nguyen

CSC 135

April 1, 2019

Becoming a CSC major

Nowadays, technology has become a part of our daily lives. Computing devices such as smartphones, desktop, digital camera together with social media have played a key important role in the sharing of information and ideas between human interaction. Although many people say that technology has made us become lazier and less socially active, we cannot deny the benefits of technology. In fact, it is our goal as human beings to become the owner of technology not the product of technology. Therefore, I think it is necessary for everyone to learn basic computer science skills so that we can get advantage of this information age. When I was young, my dream was to become a software engineer. I was so excited when my parents bought me my first computer when I was in third grade. According to Michael Zyda in his article “Computer Science in the Conceptual Age,” “the last quarter of the 20th century saw the U.S economy transition from the industrial age to the information age.” In other words, nowadays, many people choose to be knowledge workers, not manual laborers. In fact, Computer Science has become one of the most popular study fields that draw the increment enrollment of students and faculties in many universities in the world. Become a Computer Science major is about having fun with computers by studying the fundamental of computers and learning programming languages so that we can develop and create something meaningful to the world. This paper will focus on the benefits of becoming a Computer Science major to Computer Science or non-Computer Science students who consider this as their future major. Students who are majoring in Computer Science will have the opportunities to develop computational thinking skills, having unlimited future career options, and making a positive impact on the world.

First, majoring in Computer Science will help us develop computational thinking skills such as design, creativity, logical and critical thinking. In fact, these skills are essential for people who are looking for high-demand jobs in the 21st century. For example, according to Peter J. Denning, Matti Tedre, and Pat Yongpradit in their article “Misconception About Computer Science,” in a professional world, “our ability to obtain a job depends on how well we

display competence in using computational methods and tools to solve problems of interest to our employers.” Also, a static show that “more than 7.7 million Americans use computers in complex ways in their jobs.” Therefore, we cannot deny the benefits of majoring in Computer Science. In my opinion, learning to code is essential for every adult and we should apply that as a basic subject at the K-12 level system. With the internet open sources such as code.org and codecademy.com, we can easily have access to coding materials. I believe the information age is the best time now to learn to code because everything in our life evolves technology usages. In addition, by becoming a Computer Science student, we must be able to understand calculus math, physic, and chemistry, which are beneficial for developing our logical and critical thinking abilities. In other words, “Computer Science is basically science and math. The engineering needed to produce the technology is all based on science and math” (Denning, Tedre, and Yongpradit 33). From my experience, becoming a Computer Science student also means we must spend hours to self-study and figure out the stuff our owns. For example, some problems might be simple than it looks, and as a Computer Science student, we sometimes overthinking a problem too much. This is not bad because what we are doing is training our brain to think more logical and be more creative. In addition, “Programming is concerned with expressing a solution to a problem as a notation in a language” (Denning, Tedre, and Yongpradit 32). In other words, programming takes practice and once we master the core knowledge of programming, we will find it fun and easy to learn.

Secondly, the benefit of becoming a Computer Science major is that once we graduate, we can have many different jobs and careers opportunities. For example. “computer science professionals can engage in many important activities such as designing software, hardware systems, networks, databases, and applications” (Denning, Tedre, and Yongpradit 32). With the growth of the internet, we can decide whether to work at home or work at a company. Also, a computer science student can have many chances to take part in a summer internship, summer coding camp, or science fair. Not only students have the option to explore and learn things, but they also can meet and talk with their future employers, whom they share interested in working with after they graduate. Because technology evolves every year, so it requires us as Computer Science students to keep update to what the new technology is about. I myself think that being a programmer is not just about writing meaningful software, but also learn to work with others, by communicating effectively with the team members together with developing critical thinking in a

huge project, to decide whether it is worth to follow the project. A career possibility that a Computer Science graduate student can take part in could be becoming a Computer Science teacher because of the lack of Computer Science teacher in the U.S education system. Therefore, if any student who wants to be a Computer Science teacher, a Computer Science degree is very beneficial. Another career that most students choose to become is a game developer. In fact, “the game industry requires graduates to have strong programming and developing skills and be capable of working with different people in a large team” (Zyda, 68). Again, a computer science student can become a software engineer, systems administrator, information technology support specialist, web developer, etc.... depends on what areas they are most interested too. According to Tracy Camp, W. Richards Adrion, Betsy Bizot, Susan Davidson, Mary Hall, Susanne Hambirsch, Ellen Walker, and Stuart Zweben in their article “Generation CS: the growth of Computer Science,” “The average number of CS majors at academic units has more than tripled since 2006 and more than doubled since 2011.” Therefore, a person who studies Computer Science will have many job opportunities for their future.

Lastly, as I mentioned earlier, technology has brought a lot of benefits to the human revolution during the informational age. As a Computer Science student, we want to make a big impact on the world, thus, make life easier. The last ten years have witnessed the invention of the computer, smartphone, digital market, etc. I am sure we all heard about Bills Gate, Mark Zuckerberg, Steve Job, and Jeff Bezos who represent the evolution of the computer operating system, social media, and smartphone. Without these people's contribution, it is hard to think about how our society will look like today. According to Vijay Kumar and Thomas A.Kalil in their article “The future of Computer Science and Engineering Is in Your Hands”, “Computer scientists and engineers can have a huge impact on the future of the filed.” For example, in the government, those engineers can design and create “new research initiatives, inform IT-related policy decisions, and serve as a catalyst for public-private partnerships involving government, industry, and academia” (Kumar and Kalil 39). We have seen so many inventions in the last two years, according to Kumar and Kalil. For example, they mentioned "robotics, cyber-physical systems, and the Internet of Things.” As a result, we can see that the students with Computer Science degree can bring a lot of benefits to society. Nowadays, computers have been using everywhere at school and work. Therefore, if students are comfortable with the change, they will likely to see the benefit of studying Computer Science. One of the most benefits of technology is

it makes education becomes available to people in the world. With the Internet, we can access all sort of information online. As a Computer Science student, we have access to the best information in our control to share and make learning become more enjoyable, thus, making a big impact on our world.

In conclusion, with the growth of technology, we need more and more Computer Science students who are ready to study and take part in the high change in human development. Technology has changed our way of communicating and makes human's life easier. This paper has explained the central benefits of becoming a Computer Science major in three different aspects. Becoming a Computer Science student helps us to improve our computational skill and develop a sense of logical thinking, thus, make a positive impact on the world, and have unlimited career opportunities. If we are unsure about what major to choose in college, then Computer Science major is something for us to consider.

Works Cited

- Camp, Tracy, et al. "Generation CS: The Growth of Computer Science." *ACM Inroads*, ACM, 16 May 2017, dl-acm-org.proxy.lib.csus.edu/citation.cfm?doid=3095781.3084362
- Denning, Peter J, et al. "Misconceptions about Computer Science." *Communications of the ACM*, ACM, 21 Feb. 2017, dl-acm-org.proxy.lib.csus.edu/citation.cfm?doid=3055102.3041047
- Kumar, Vijay, and Thomas A Kalil. "The Future of Computer Science and Engineering Is in Your Hands." *Communications of the ACM*, ACM, 25 June 2015, dl-acm-org.proxy.lib.csus.edu/citation.cfm?doid=2797100.2668022
- Zyda, Michael. "Computer Science in the Conceptual Age." *Communications of the ACM - Finding the Fun in Computer Science Education*, ACM, 1 Dec. 2009, dl-acm-org.proxy.lib.csus.edu/citation.cfm?id=1610272&picked=formats