

Write a report (400-600 words) in which you...

- distinguish among computer science, software engineering, and information technology.
- describe at least three fields of computer science and how computer science is applied within those fields.
- identify which field of computer science you are most interested in and why, or how you will use computer science in a different field of interest.

Someone who isn't technologically adept or doesn't know too much about computers or how they work might think that computer science, software engineering, and information technology are three different terms that describe the same thing. However, there are very distinct differences among these three fields that render them independent and separate from one another.

According to techterms.com, "Computer science is the study of computers and computing concepts." Computer science studies both the hardware of the computer, as well as the software. Hardware includes all of the physical components of a computer, such as the monitor, motherboard, and more, whereas software includes all of the programs and applications that the computer runs. Since computer science deals with both software and hardware, it is easy for people to use the term "computer science" as an umbrella term for any occupation that deals exclusively with hardware, exclusively with software, or with both. In layman's terms, any field of study that concerns computers can arguably be classified under the term "computer science."

According to techtarget.com, "Software engineering is the application of principles used in the field of engineering, which usually deal with physical systems, to the design, development, testing, deployment, and management of software systems." Obviously, software engineers only deal with the software of the computer. In simpler terms, software engineers apply different real-life concepts to designing, developing, and maintaining applications and programs on computers. This is the field that I am most interested in because I want to work for a video game company as a software engineer so that I can apply different concepts to programming video games. Programming is essential to being a software engineer because being a software engineer depends on writing code for programs that enables the program or application to run better.

According to techtarget.com, "Information technology is the use of computers, storage, networking, and other physical devices to create, process, store, secure, and exchange all forms of electronic data." Like computer science, information technology deals with both hardware and software. However, unlike computer science, information technology deals strictly with the hardware and software that is concerned with creating, processing, storing, securing, and exchanging different types of data, such as web files, photos, videos, and other forms of data that can be transferred on the computer. The IT Department in various enterprises is very helpful because they are the ones to call when your computer is having an issue, whether it is with its hardware or software.

To write my essay, I started by outlining the format to which my report would follow. I decided to write a paragraph each for computer science, software engineering, and information technology, respectively, as that was the easiest way to organize my report, as well as my thoughts. I also used skills that I learned from Comp 2 that I took last semester to help me craft a report that makes sense throughout. The Elements of Thought from the Critical Thinking Model helped me think about exactly how to phrase my sentences so that someone who isn't technologically gifted could understand the terms that I used. The Software Engineering link helped me find articles to read that not only expanded my knowledge on the field that I am most interested in, but it also helped me develop how I would write about the field in my report. I liked being able to actively use the three FGCU Scholar Skills to write this report. Before writing my report for this class, I didn't even know what these three skills were, but now that I do, I will definitely use them to help me write better essays in the future. Using these three skills also helped me differentiate between computer science, software engineering, and information technology, three fields that I didn't truly know the difference among. I knew that they were different, but I was unsure exactly how the three fields were different. Due to using the FGCU Scholar Skills, I effectively taught myself about each of the three fields.