

Fields Report

In today's world, technology is being used to advance car development, business practices, medical advance and in many other practices. The advancement in technology has been due to the help of experts in the fields of computer science, software engineering, and information technology. The people specialized in these different areas have brought numerous technology ideas to life.

Computer Science is defined as “the study of algorithms and their efficient implementation in a computer” (Dale, N., & Lewis, J., 197). This expertise is useful in solving problems and analyzing the software that is created. Software engineering is defined as “applying engineering principles and systematic methods to develop programs and operating data for computers” (Hoffman, M.). This field is beneficial in creating more complex applications that might be more beneficial for companies and also solve problems that advance their businesses. Information technology is a field that “covers the support, administration, and design of telecommunications and computer systems” (“What is information technology?”). This field deals with the physical technology hardware of a company. Many companies have IT support people to assist with server issues, connection issues, and the setup of computers, phones, etc. This role is very important in protecting businesses from malware and making sure that there are no issues so that the business can be as efficient as possible. These three areas of technology are crucial in the success of a company and all play a prevalent role in the advancement of business in modern day society.

Within the realm of computer science, there are many different fields that one could

utilize their computer science. A Data Mining Specialist uses computer science knowledge to solve problems and generate useful and informative information for businesses from a large amount of data. According to compuserscienceonline.org, Data Mining Specialists, “design algorithms and software for data analysis in specific environments” (Hoffman, M.). A computer science background is necessary in order to create the algorithms in order easily sift through and analyze the data. Computer Science is also prominent in the field of an Operations Research Analyst. This field works to create business efficiency. Computerscienceonline.org states that “operations research analysts help executives and management solve problems and create data-driven strategies” (Hoffman, M.). Lastly, computer science is also very prominent in the field of Computer Science Teachers. This is pouring into students the usefulness of computer science and the tools needed to pursue computer science fields. In essence, “computer science teachers prepare lesson plans and practical exercises o instruct students in computing theories as well as the use of computer software applications” (Hoffman, M.).

The field that I am most interested in pursuing is the field of Operations Research. I feel that this field will allow me to constantly solve problems and learn new areas of business. This field would challenge me and put everything that I learned with my degrees to use. I believe that in working in business and using the critical thinking that I gained from my mathematics side I would provide a company with many ways in which they could be more efficient and more technologically advanced within their different departments.

In conclusion, our world has been driven by constantly changing technology. Areas that deal with technology, computer science, software engineering, and information technology are all crucial in allowing businesses to sustain the technology advancements and compete with other businesses. The fields within computer science also utilize computer science to create

strategies, algorithms, and processes within companies. Overall, computer science is extremely prominent and applicable in our modern-day society and I believe that it will be prominent in my field of choice.

Dale, N., & Lewis, J. (2015). *Computer Science Illuminated*(6th ed.). Burlington, MA: Jones & Bartlett Learning logo.

Hoffman, M. (2018, November 28). A Guide to Computer Science Careers. Retrieved March 29, 2019, from <https://www.computerscienceonline.org/careers/>

What is information technology? (n.d.). Retrieved March 29, 2019, from <https://www.bestcollegereviews.org/faq/what-is-information-technology/>

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In order to write this paper, I first began with an outline. An outline was crucial in order to gather my thoughts and write out the different topics that I wanted and needed to write out. The outline showed me what areas I needed to find information and what areas that I needed to research. While writing this outline, I also utilized the Elder Paul Critical Thinking Model and the 5 Why's in order to help direct what I was writing about and have a central goal and direction of the paper. My 5 Why's were:

- Why am I interested in Operations Research?
- I enjoy solving problems.
- I have critical thinking skills.
- I have a background in business and mathematics.
- I would be an asset to a company with my background.

After I created my outline, I began to write my paper. While writing my first paper, I utilized the knowledge I gained in previous Composition and writing classes. When I finished my first draft, I used Grammarly to correct the grammar mistakes that I had made while writing. After this, I cleaned up my paper in order to finalize my final draft. I believe that this paper is a professional outlook that shows the research that I found on computer science and the passion for a job in operations research for a future employer. Overall, the process that I went through allowed me to write a cohesive paper that focused on the area of computer science.