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Intro to Computer Science  
Fields Report

Part One:

- Computer Science is the study of computing, programming, and computation in correspondence with computer systems. The main focus of the field is to design, test and analyze concepts/work you've made. For Computer Science, you must be math strong.
- Software Engineering is all about developing programs that run off of machines. Software Engineering uses various accepted methodologies to help make the software. When a Software Engineer is making a program, they have a lot to account for. One of the main things being what machine/system the program will be running on.
- Information Technology is a set of processes and programs to collect and present information. An IT Tech will analyze, develop and test software. They also are very good at troubleshooting problems someone could have with a computer.

Part Two:

- Programming Languages are a huge part in computer science. One of the main things programming languages focuses on is compiler optimizations. It's coding that makes your program speed up when it's running. New features are often added into programming languages to make things run more efficiently than they were before.
- Networking is another huge part in computer science because it allows for the computers to "talk" to each other. This allows to share data, and more efficiently work in a work environment. It relies on theory for encryption and routing algorithms to build efficient and low power network nodes.
- Software Engineering in computer science relies mainly on programming languages. It's a lot of making software and putting that software to use on a computer. As a program gets larger from adding software to it, it gets much harder to manage. Software Engineers will spend a lot of time managing software made and figuring out how to fix it or make it work more efficient.

### Part Three:

I am still most interested in Software Engineering because I am the type of person who really likes to build and make things. I also think it's a good fit for me because I like computers and learning how each component works with one another to make a computer run. The part that fascinates me the most about software engineering is the actual software part. Designing a blank screen and putting thousands upon thousands lines of code is just so cool to me. I would love to make something great one day and be able to say that I made it. One thing that a lot of people don't think of when coming into this field is that there will be really frustrating moments when a program doesn't work properly or something you've added causes it to fail. With this being said, most people don't realize this and the fix could be one character. I think it's really cool how software engineers need to think in order to do their job effectively.

### Work Cited

#### Part One:

Computer Science Definition:

<http://www.businessdictionary.com/definition/computer-science.html>

Software Engineering Definition:

<http://www.businessdictionary.com/definition/software-engineering.html>

Information Technology Definition:

<http://www.businessdictionary.com/definition/information-technology-IT.html>

<http://work.chron.com/specialist-make-2131.html>

#### Part Two:

[http://aihorizon.com/essays/basiccs/general/cs\\_areas.html](http://aihorizon.com/essays/basiccs/general/cs_areas.html)