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Fields Report

Computer science, software engineering, and information technology- what do these subjects have in common? Well, for those not in a relative field, they probably appear very similar, if not the same. But in practice, their distinctions are fairly stark. Computer science is the study of computers and computational systems, whereas software engineering is the application of engineering to the development of software in a systematic method, and information technology is the study or use of systems for storing, retrieving, and sending information. But now that we've established these distinctions, let's unpack wat makes them so similar.

Of the three, computer science is the broadest ranging. A few field examples of computer examples would include: hardware, software, and network systems. Hardware is probably what most people are familiar with, as it pertains to the physical components which comprise computational machines. Basically, they're what makes the computer function in the first place. Software, in comparison, is the intangible component to computers which can ease the usability for the general user in the form of programs and applications. Beyond this generic definition, software can be used in a multitude of other ways and is typically utilized to construct things like websites and videogames. In addition, software is used to program devices. Some may be commonplace, such as: remotes, thermostats, and cruise controls. But can also extend into more esoteric realms, such as: military defense, weather projection, and data harvesting. While all

these advents are pretty incredible, network system engineers are to thank for why the others are so prominent in our lives. It's because of them this "small world" is continuously growing smaller. In a nutshell, network systems engineers devise typically large networks of what're called servers to connect people of the world from its many corners. An even more reduced definition may include that it's because of them things like the internet exist, for all the internet is, is a complicated network of interconnectedness amongst machines. Their work requires constant refinements to increase speed of data transfer, and they accomplish this in a multitude of ways, such as: p2p, routing, and 'sharding'.

Of the three fields, software is the one I'd admit a personal bias towards. I find it fascinating, in its many forms, how it manipulates machines to in turn, manipulate our everyday lives. Computers and software have been around for some time, and one might argue hardware, in its ever-refinement is to thank for technologies omnipotent presence, but I disagree. While hardware is the gate to which we interact with this new technological realm, software is the value beyond the barrier. To simplify, and put a bow on my point, what is a computer without software? Simply a machine. But, now you may ask, what is software without hardware? Well, some may say something as simple as "nothing", but I think the real answer is more complex. To me, software without a machine is an idea, a solution, or something as impossible as a dream. It's anything we can manipulate to be, and everything we've yet to discover, and it's for these reasons I chose it as my future. To make and advance all of what we think possible.