

Information Technology

Do you have an inquisitive mind; often wonder what makes things work? Do you like to analyze and solve problems? Are you creative and resourceful? Do you like working with computers and the newest technologies? If so, you may want to explore careers in Computer Science and Information Technology.

Careers in Computer Science and Information Technology work with the infrastructure and creation of databases, applications, computer software, websites, mobile data, servers, networks, etc. Each part interconnected in the informational ecosystem. There are many different areas in which you can specialize; Computer / Help Desk Support, Network or Database Administration, Web or Application Development, and many more. Earning a Bachelor's degree is typically the minimum requirement for career entry. Employers tend to also prefer hiring candidates with work experience in the field, which can be gained through an internship. Some advanced positions, such as Senior Administrators, Senior Developers and Chief Technology Officers may require a master's degree. Due to the rapid changes in technology, it is imperative for those wishing to pursue these career areas to stay current on the latest tools and technologies available.

■ **Computer Support Specialist:**

Responsible to answer questions and troubleshoot problems on desktops, laptops, mobile devices, tablets, and peripheral equipment (i.e. printers), as well as hardware, software and operating systems for end users. Support expertise in operating system platforms, such as Microsoft Windows and Mac OS X, products, such as MS Office suite, and web-based systems utilized by the organization in which they work. In addition, some Computer Support Specialists may be responsible for all communication services, including dialup, VPN, wireless, etc. As some workers in organizations may be based in various locations or work from home, it will be required to provide remote support.

■ **Database Administrator:**

Responsible for supporting all critical enterprise database management systems and technologies for an organization; including creation and implementation, real-time and historical performance monitoring, space management, backup and recovery, and problem troubleshooting and resolution. Prepares project plans and works with vendors to implement databases as well as resolve issues

■ **Network Administrator:**

Responsible for designing, organizing, modifying, installing, and supporting a company's computer systems. Designs and installs LANs, WANs, Internet and intranet systems, and network segments. Install and support LANs, WANs, network segments, Internet, and intranet systems. Install and maintain network hardware and software. Monitor networks to ensure security and availability to specific users. Determine network and system requirements. Ensure network connectivity throughout a company's LAN/WAN infrastructure is on par with technical considerations.

■ **Software Engineer:**

Responsible for research, development, and application of software as it relates to new and existing products. Design, modify, develop, write and implement advanced and complex software programming applications; support and / or install software applications / operating systems. Develop technical and software specifications for products and systems. Test review and analysis, and documentation of software. Write efficient code for highest complexity programming assignments.

■ **Application Developer:**

Responsible for working with multiple programming languages, such as Java, C++, CSS to create software that meets end users requirements. Handles the full product life cycle; design, prototype, test and debug prior to product release, ensuring to meet the required product specifications. Developers work closely with computer analysts and engineers to develop the necessary specifications for software.

■ **Web Developer:**

Responsible for creating (designing and coding) web pages, web applications and web content, from layout to function and according to a client's specifications. Strive to create visually appealing sites that feature user-friendly design and clear navigation. Hands on experience with Web Applications and programming languages such as HTML, CSS, JavaScript, JQuery and API's

■ **Chief Technology Officer (CTO):**

Responsible for providing leadership in identifying, assessing and managing technology needs for an organization. Prioritize and drive value-added projects and resource allocation, determine the opportunities to simplify technology utilized, combine or eliminate products and services, identify, evaluate and select new and emerging technology that can be assimilated to significantly improve competitiveness, drive the development of corporate and operating company strategies, and lead process improvement activities searching for ways to automate robust processes. The CTO is also responsible for establishing policies and programs around the use of technology by others within the organization.