Florida Institute of Technology– Career Management Services

Career Profile: Computer Science

Computer Scientists apply the theories and principles of computer science and mathematical analysis to create, test, and evaluate the applications and systems that make computers work. The tasks performed by these workers evolve quickly, reflecting changes in technology and new areas of specialization, as well as the changing practices of employers.

Computer scientists conduct research on a wide array of topics. Examples include computer hardware architecture, virtual reality, and robotics. Scientists who research hardware architecture discover new ways for computers to process and transmit information. They design computer chips and processors, using new materials and techniques to make them work faster and give them more computing power. When working with virtual reality, scientists use technology to create life-like situations. For example, scientists may invent video games that make users feel like they are actually in the game. Computer scientists working with robotics try to create machines that can perform tasks on their own—without people controlling them. Robots perform many tasks, such as sweeping floors in peoples' homes, assembling cars on factory production lines, and "auto-piloting" airplanes.

Most computer scientists work in a typical office setting or in laboratories in which computer equipment is located. If working for vendors and consulting firms, there is frequent travel to meet with customers. Telecommuting is becoming more common although most work 40 hours a week.

Most computer scientists are required to possess a Ph.D. in computer science, computer engineering, or a closely related discipline. For some positions in the Federal Government, a bachelor's degree in a computer-related field may be adequate. In order to be admitted to a Ph.D. program, applicants generally are required to obtain a bachelor's degree with a strong computer science or computer engineering component. Popular undergraduate majors for Ph.D. program applicants include computer science, computer engineering, software engineering, information systems, and information technology. A bachelor's degree generally takes 4 years to complete. A Ph.D. generally requires at least 5 years of study beyond the bachelor's degree. Ph.D. students usually spend the first two years taking classes on advanced topics, including computer and software systems, artificial intelligence, digital communication, and microprocessors. Students spend the remaining years conducting research on topics in computer science or computer engineering.

The average starting salary for a bachelor's degree in computer science is $61,783. The average starting salary for a master's degree in computer science is $70,625 with average starting salary at the doctorate level at $101,432.

For more information on a career in Computer Science contact the Career Management Services Office or your academic advisor.

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