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Computer Science

### General Facts About Computer Science

- Computer science is the study of the principles and use of computers.
  - It deals with the foundations of information and computation, together with practical techniques for the implementation and application of these foundations.
  - It enables innovation, economic growth and is an important part of culture. It shapes how people interact with each other and the world around them, and it impacts jobs, health care, national defense and energy, among other fields.
- It is a discipline that spans theory and practice. It requires thinking both in abstract terms and in concrete terms.
- Computer scientists apply their knowledge of information theory and computation to computer systems.
  - They usually focus on theory while computer engineers focus on hardware.
  - Areas of computer science include programming, software engineering, information theory, algorithms, databases and graphics.
  - Important subjects related to computer science include physics, algebra, calculus and English.
  - Good computer scientists have strong analytical, problem solving and logic skills.
  - Communication skills are also an important part of computer science.
  - A bachelor's degree is sufficient for a number of jobs related to computer science but higher level roles often require a PhD.

- According to CRA's survey, the number of new undergraduate computer science majors rose by more than 29% last year. The year-over-year average increase was about 19%.
- Almost one-in-five unemployed teenagers believe they are not hired because their computer skills are not good enough for the job. According to the Prince's Trust Poll.
- Our increasing reliance on computer systems makes computer science a growing field with computer scientists typically being sought after and receiving high salaries.
- According to National Association of Colleges and Employers (NACE), student of computer science can have starting salaries as much as up to an average of \$51,070. According to the Bureau of Labor Statistics the median salary of computer programmer in 2009 was \$65,000 annually. And most of them within first year of their job break away this path. The salaries at different levels in computer sciences varies accordingly. With doctoral degree in computer science it is \$93,050, with bachelor degrees it is \$50,820, in computer system analysis it is \$46,189 and in management information systems it is \$44,417.
- A job as a computer scientist may involve creating software, teaching at a university, research and development, consulting or programming.
- As a computer scientist you could end up animating movies, testing software, designing video games, evaluating computer systems, working on websites or creating applications for mobile phones.
- The video game industry has sales greater than Hollywood box office sales.