Computer Science

Many people, if asked to define the field of computer science, would likely say that it is about programming computers. Although programming is certainly a primary activity of computer science, programming languages and computers are only tools. What computer science is fundamentally about is computational problem solving —that is, solving problems by the use of computation.

This description of computer science provides a succinct definition of the field. However, it does not convey its tremendous breadth and diversity. There are various areas of study in computer science including software engineering (the design and implementation of large software systems), database management, computer networks, computer graphics, computer simulation, data mining, information security, programming language design, systems programming, computer architecture, human—computer interaction, robotics, and artificial intelligence, among others.

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