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## Brief Note on Computer Science

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## DESCRIPTION

Computer science is the study of computers and their theoretical and practical applications. Computer science applies the principles of mathematics, engineering, and logic to various functions such as algorithm formulation, software and hardware development, and artificial intelligence. Areas of computer science include research on algorithms and data structures, computer and network design, modelling of data and information processes, and artificial intelligence.

Computer science draws some of its foundations from mathematics and engineering, so it incorporates technologies in areas such as queuing theory, probabilities and statistics, and electronic circuit design. Computer science also makes extensive use of hypothesis testing and experimentation in conceptualizing, designing, measuring, and improving new algorithms, information structures, and computer architectures. Computer science is considered part of a family of five distinct, interrelated disciplines: computer engineering, computer science, information systems, information technology, and software engineering. This family has become commonly known as the computer field. The main uses of computers in medical care include hospital information systems, medical data analysis, medical imaging laboratory computers, computer-assisted medical decision-making, critically ill patient care, and computerassisted therapies. Medical laboratories around the world can use computer technology to test the properties of thousands of different compounds and one day turns them into life-saving drugs. In addition to testing, this number can also be sorted and analysed by a technician in just a few hours.

These 5 disciplines are interrelated with inside the feel that computing is their item of examine, however they're separate because every has its personal studies angle and curricular focus. (Since 1991 the Association for Computing Machinery [ACM], the IEEE Computer Society [IEEE-CS], and the Association for Information Systems [AIS] have collaborated to increase and replace the taxonomy of those 5 interrelated disciplines and the recommendations that academic establishments global use for his or her undergraduate, graduate, and studies programs). Taking blood samples and analysing the results is an important part of working in a medical laboratory, where computers do alot of work.

Sophisticated computer technology allows you to quickly determine if the levels of proteins, amino acids, sugars, and other elements are within the normal range. You can use the same computer to generate the results and send them back to the patient's doctor.

The principal subfields of pc technology consist of the conventional examine of pc architecture, programming languages, and software program development. However, in addition they consist of computational technology (using algorithmic strategies for modelling medical data), photos and visualization, human-pc interaction, databases and records systems, networks, and the social and expert problems which are precise to the exercise of pc technology. As can be evident, a number of those subfields overlap of their sports with different present day fields, inclusive of bioinformatics and computational chemistry. These overlaps are the result of an inclination amongst pc scientists to apprehend and act upon their field's many interdisciplinary connections.

Computer science is based on algorithms and data structures. The theory of computation is concerned with abstract models of computation and the general types of problems that they can solve. The fields of cryptography and computer security are concerned with the development of methods for secure communication and the prevention of security flaws. Image generation is addressed by computer graphics and computational geometry. Database theory is concerned with the administration of data repositories, while programming language theory is concerned with methods to the representation of computer operations. Human-computer interaction studies the interfaces between humans and computers, while software engineering studies the design and concepts of software development. Operating systems, networks, and embedded systems are all research areas that look at the concepts and design of complex systems. The building of computer components and computeroperated equipment is referred to as computer architecture. Artificial intelligence and machine learning aspire to synthesise goal-oriented processes present in people and animals, such as problem-solving, decision-making, environmental adaptability, planning, and learning. Computer vision tries to comprehend and process image and video data, whereas naturallanguageprocessing aims to understand and process textual and linguistic data in artificial intelligence.

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