TECH TALKS

Cryptocurrency and Blockchain Technology 101

Bitcoins use blockchain technology to make transactions secure and trustworthy. This technology was introduced in the year 2009 by a man named Satoshi Nakamoto who wanted to replace Bitcoins with fiat currency.

Blockchain, as the name suggests, is a chain of blocks that contain information. It can be any kind of information that a company feels is necessary to be secured strictly. In a blockchain system, every time data is added, it creates a new block. These blocks are chronologically connected. If any change has been made in any of the blocks, it will add another block with the changed data. Due to its utmost transparency feature, the changes made are visible clearly. Imagine that a company owns a server comprising 10,000 computers with a database holding all of its clients' account information. The company has full control of each of these computers and all the data stored within them. It is almost impossible to cheat or hack this digital ledger that stores critical data block by block.

Storing data in a blockchain is similar to how data is stored in a ledger but it is not centralized and has its data stored in multiple computers. Blockchain is tamper-resistant which creates security for the data and makes it trustworthy. Multiple participants have access to your information. So every time there is a change made in the previous data, the data is reviewed by all the participants. This way the data stored in a Blockchain is secure.

In this fast-growing world where technology keeps improving at a fast pace, the Blockchain system can be an important factor for data storage and management. As we prepare to head into a new era of technology, it's no longer a question of "if" legacy companies will catch on to blockchain technology—it's a question of "when."

-Ishwar Mishra, SYJC ARTS

Indian Tech Market: Version 2.0

Information is wealth in this 21st century. As far as India is concerned, we are the youngest nation in the world to have a vibrant technology ecosystem. What makes us stand in this position? Well, the Indian IT sector is now a 150 billion dollar industry and the stats have not seen a drop in a decade. Shareholders are genuinely satisfied by the profit margins. What's more, the cost of the internet in India is way cheaper as compared to other Asian countries. This makes India a completely favorable place to start an IT industry. The labor cost in India is cheaper as well which is an added incentive.

India is also doing a great job in the field of website development because students and IT professionals are keen to work as web developers. They get clients from all over the world and even at different currency rates, and therefore are able to earn a significant amount of money and bring in foreign investment.

Recently, India got its first gaming server and many other AAA (high-budget) game developers are thinking of bringing more gaming servers to India. The Indian gaming community is shifting from smartphone gaming to PC gaming way faster than expected. Moreover, the Indian government has imposed moderate and reasonable custom charges on luxury goods such as PC components. This has made way for the rise of the graphic designing and animation sector in the country.

In the future, India may become a stronger contender in the race of IT sharks and that day is not far. It can also become the lighthouse for India's growth.

-Omkar Arote, TYBSc CS

Cloud Computing- the new method of storing data

In cloud computing, the word cloud refers to the internet. Thus, cloud computing means "a class of Internet-based computing", where different services such as servers, data storage, visualization, and applications are provided to an organization's computers and devices through the internet. A simple example is how Microsoft Office uses Microsoft OneDrive for data storage. Hence, today, most platforms have changed the way they store data.

Cloud computing is an internet-based utility computing of intrinsically shared resources, software, and information that are used by users hosted on virtual servers. It binds any endowment-based or pay-as-per-use service that, in real-time over the internet, enlarges IT's subsisted capabilities. In this system, there's a prominent caseload shift. The heavy lifting of the running applications is no longer accessible in local computers. The cloud made up of the network of computers handles the running of applications. It's a type of computing that depends on sharing resources despite having local servers (or personal devices) to handle the applications. The primary goal of cloud computing is to apply high-performance computing power, used by the users to perform bulk computations, to provide data storage, or to power large, and immersive computer games.

The information is stored by the user or organization on the cloud can only be accessed by the client via remote internet. The main aim of cloud computing is to provide end-users with remote dynamic access to services, computing resources, and applications, including operating systems and infrastructure over the internet. The cost-effectiveness of cloud computing in contrast to the locally used hardware and software is significantly reducing the cost of hardware and software infrastructure and is firmly associated with technological advantages such as high levels of virtualization scalability.

Organizations using cloud computing do not need to pay extra for the scalability feature. In order to ensure data security, many cloud service providers offer a broad set of policies, technologies, and controls. Therefore, cloud computing is set to unlock great potential in the technology industry and bring out positive changes in the future.

-Meenakshi Sambari, SYBSC CS