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This Issue

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"Quality of Campus Life"
in the Education World
India Higher Education Grand Jury
Awards 2022-23

Editor's Note

Warm greetings to all the readers of Allenbytes!!

We are pleased to share with you the third release of our bi-annual newsletter Allenbytes.

The inspiration behind the birth of this newsletter was to provide a platform where students and faculties can participate and share their information and views on various topics and news of interest. It would also be a snapshot of the various activities and advancements going in The Department of Computer Science & Engineering. To make our readers scratch their mind we also have a crossword and visual puzzle.

I hope the content may enhance the knowledge of our readers and meet their expectations.

I would like to take the opportunity to thank all the faculties and students who have made their contribution in bringing this newsletter to reality. I also owe my thanks to all the members of editorial board for their altruistic contribution.

I extend my deepest gratitude to Campus Director of Allenhouse Group of Institutions Prof. (Dr.) Bhagwan Jagwani, Director of Allenhouse Group of Institutions, Dr. Rubby Chawla and Director of Allenhouse Institute of Technology, Prof. (Dr.) Somendra Shukla for their guidance and suggestions for bringing forth the best of our efforts.

We sincerely hope that readers will find the articles interesting, relevant and knowledgeable leading to a diverse view of modern issues. We welcome valuable suggestions and comments from our readers.

Ms. Richa Mishra, Asst. Professor-CSE

Artificial Intelligence is changing Medical Sciences and Its Future

Medical Sciences make substantial use of computer systems with artificial intelligence. Common uses include remote patient treatment, prescription transcription, increasing doctor-patient communication, medication discovery, and patient diagnosis. Modern computer algorithms have lately achieved accuracy levels that are comparable to those of human experts in the field of medical sciences, despite the fact that computer systems frequently perform jobs more quickly than humans do.

According to analysis, it won't be long until humans are entirely replaced in some positions within the medical sciences. AI appears to be in a good position to transform the healthcare sector. By transcribing notes, entering and arranging patient data into portals like EPIC, and diagnosing patients, AI systems might possibly spare up time for busy doctors and enable them get a second opinion. Patients can also be benefitted from the availability of prescription medicine alternatives and follow-up care, thanks to artificially intelligent systems. In addition, AI has the ability to diagnose patients remotely, expanding access to healthcare outside of the world's major cities and into more rural areas. Despite the bright and optimistic future of AI in healthcare, there is still much work to be done.

Apoorva Mishra, Asst. Professor-CSE

Advancement in Artificial Intelligence

Building intelligent computers that are capable of carrying out tasks that generally require human intelligence is the focus of the broad field of artificial intelligence (AI), a subfield of computer science. Every year, machines become more and smarter, but artificial intelligence hasn't yet lived up to expectations that some of the biggest technological companies in the world have created. According to Grefenstette, AI researchers have begun to demonstrate that it is possible to effectively adapt AI training techniques to changing surroundings or tasks, leading to more reliable agents. This year, he predicts that additional industrial and scientific implementations of these techniques would result in 'noticeable breakthroughs.'

DeepMind, an Alphabet-owned research facility with offices in London, has made one of the most important advancement in AI in latest years. In order to address a 50-year-old 'grand challenge,' the company has successfully developed AI software that can predict the structure that proteins will fold into in a matter of days. This breakthrough could lead to a better understanding of diseases and the development of new drugs. Many organizations has started to use AI models to give self-determination to people from ordinary tasks through automated services. Currently the government of India and Google had decided to work together to provide new advancement in Artificial Intelligence by establishing the computer labs in many cities in India. Government of India has also decided to provide separate budgets for making AI projects. India is set to use revolutionary technologies for enhanced efficiency and produce more income in the near future.

Narendra Kumar Yadav, Asst. Professor-CSE

Quantum Computing: Will change the future

This is the era of the fourth industrial revolution.Many countries are running in the race of data, intelligence and quantum computing. Today's, information war is running on a large scale. For this purpose, supercomputers are being used, which work on the classical computing model. It takes a lot of time to process information. The processing of future quantum computers will be much more faster than today's supercomputers. Quantum computer is very different from supercomputer, it works on quantum bits.

Classical computer based on 0 and 1 or On and Off state. While quantum computer work is in both possible states at the same time. This process is called super positioning. The functionality of qubits is based on the quantum entanglement process in quantum physics.

The Quantum computing works on qubits, then it can tell by searching more than one answer to the same question at the same time. In quantum computing, the cryptography of data is very accurate, it is impossible to hack it. With the help of quantum computing, space equation can be solved in minutes. Quantum computers can be used in the development of medicine. Quantum computers can revolutionize the exploration of the universe besides it can also be used in weather forecasting. Big companies like IBM, Intel, Google Millions of dollars are investing in this technology.

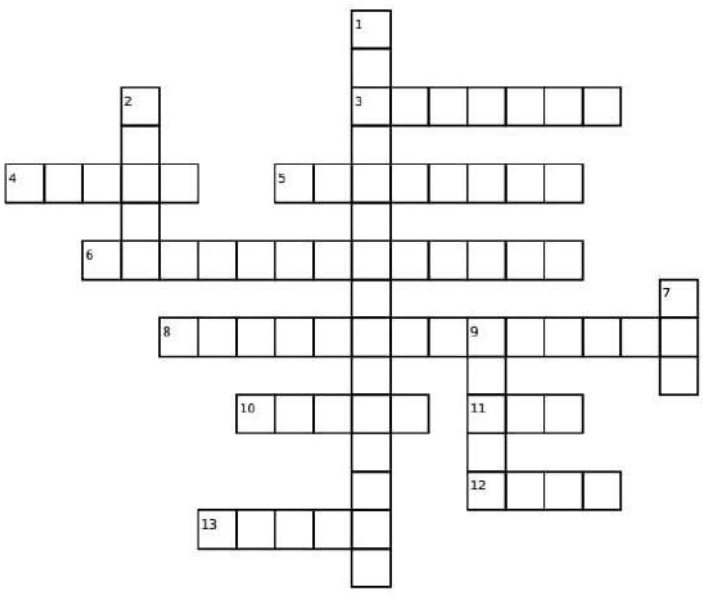
Dr. Shalini Gupta, Associate Professor - CSE

Cryptocurrency

Cryptocurrency is digital money that functions as a medium of exchange as traditional currency. The first cryptocurrency was Bitcoin. It is created, maintained, and stored using cryptography, as the name implies. A cryptocurrency is safe and does not require a central authority to complete a transaction. After American cryptographer David Chaum developed anonymous cryptographic money, significant efforts were made in that direction. Satoshi Nakamoto, a pseudonymous person or group of people, created the technical architecture of cryptocurrencies. Its decentralised nature, removes all forms of central authority, like governments and banks. Transactions can be carried out directly using public/private keys, which cannot be removed or changed. Every transaction is cryptographically protected. It has been making headlines worldwide since its debut, and people are still sceptical of its use in everyday transactions. Some difficulties in adoption are, its use for illegal purposes, underlying platform vulnerabilities, instability of exchange rates, inadequate knowledge, with high transaction and infrastructure costs.

All transactions are represented in the system by distributed public ledger called 'block chain' and are managed by currency holders. Numerous cryptocurrencies in the market are either evolving or dying. It is estimated that cryptocurrency market will rise in future.

Sandhya Devi, Assistant Professor-CSE



CROSSWORD PUZZLE

Down:

1. Technology that enables computer systems to learn and adapt by themselves.
2. Javascript library used for front-end
7. Website technology based on blockchain
9. Body that set up the rules for numeric and Alphabets

Across:

3. Deployed in session for tracking and authenticating user activity
4. Data type for decimal values
5. Attack to acquire details of user by social engineering
6. Community for software developers for doubt resolution
8. Father of computing
10. Modern database
11. Brain of computer
12. Organization for Software Certification
13. Smallest element in programming

1. Machine Learning, 2. React, 3. Cookies, 4. Float, 5. Phishing, 6. Stack Overflow, 7. Web3
8. Charles Babbage,9. ASCII, 10.Spark, 11.CPU, 12.IEEE, 13.Token

Blockchain and IoT

IoT, or the Internet of Things, refers to the overall network of interconnected devices and the technology that enables communication between them and the cloud. The Internet of Things integrates everyday 'things' with the internet.

A severe security problem has hampered IoT's widespread deployment. Because of their many security flaws, Internet of Things (IoT) devices are prime targets for Distributed Denial of Service (DDoS) attacks. Cybercriminals can easily target unprotected IoT devices and use their lax security to hack them into conducting DDoS attacks.

Scalability is another problem with current IoT networks. Existing centralized solutions to authenticate, authorize, and link various nodes in a network will become a bottleneck when the number of devices connected through an IoT network rises.

Blockchain, also known as distributed ledger technology (DLT), is another ground-breaking innovation that may aid with some of the IoT's scalability and security issues. A blockchain system's core component is a distributed digital ledger shared among system users and located on the Internet. Transactions or events are verified and added to the ledger, after which they cannot be changed or deleted. It offers a method for a user community to gather and share information.

IoT security and scalability challenges can be reduced by blockchain in the following ways:

A blockchain system's distributed ledger is tamper-proof, which eliminates the requirement for trust between the parties. The massive amounts of data that IoT devices create are not under the authority of any one organization.

Secondly, By storing IoT data on the blockchain, additional security would be added, making it more difficult for hackers to access the network. Transparency is provided by blockchain technology, which enables anybody with authorization to access the network to view a history of all previous transactions. This can offer a trustworthy technique to pinpoint the source of any data leaks and take prompt corrective action.

Blockchain can thus help billions of connected devices work together and conduct transactions quickly.

Sadhna Yadav, Asst. Professor-CSE

Third Dimension of The Internet

How the Internet and Web3 fare together

The Internet has been evolving ever since Tim Berners Lee introduced it in CERN, Switzerland back in the early nineties. It was introduced with information stuffed static webpages, later termed Web 1.0. As the times passed, the introduction of web forms, dynamic URLs and scripting made it more user-friendly. Web 2.0 enabled the user to interact with the website server and share information introducing the gigantic rise of social networking websites and e-commerce.

How Web3 is futuristic?

Web 3.0 is the haute couture technology invading the tech market with its wide range of implementations like Blockchain, Metaverse, and NFTs. It is independent of any controlling entity as the user is provided with their very own database and server along with Artificial Intelligent services for a quality user experience. The server independence can serve as the catalyst to offer other features such as security, scalability, centralization of wealth to the rightful user, and shielding from data pulled by tech companies without the consent of the user. The term Web3 was popularized in 2014 and skyrocketed on Google Trends in 2021 with multiple decentralized projects and crypto currencies getting the hype from the public.

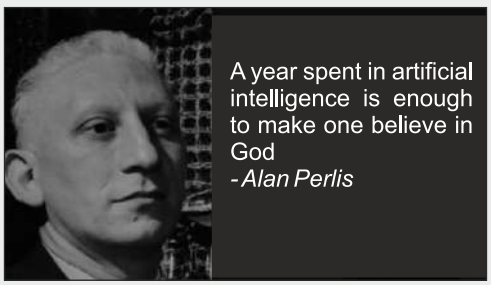
References and Research:

1 Google Trends Result Web3
2. Techopedia Web3

Mohammad Alim, B.Tech (CSE, 3rd Year)

Answer
1. Geoffrey Hinton - Known as Father of ML
2. Ethereum - Blockchain for smart contracts
3. Leetcode - Coding/Interview Preparation Platform for Programmers
4. Bhavish Agarwal - CEO of leading Indian Startup OLA

Do You Know?



1. HP, Microsoft, and Apple all began in a garage.
2. The first hard-drive, held only 5MB of data.
3. Creeper', written by Bob Thomas in 1971, is the first computer virus.
4. Roughly 10% of world's money is physical, rest exists digitally.
5. A computer as powerful as the human brain would be able to perform 38,000 trillion operations per second.

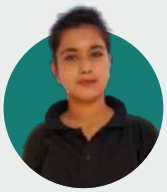
Students' Speak

My sincere appreciation and gratitude to the placement cell and my teachers for their efforts in imparting quality technical and aptitude training which helped me to grab opportunities in multiple companies.

Abhinav Yadav
B.Tech (CSE)

I feel ecstatic to share that I have been placed in multinational companies like Infosys, Wipro, HCL etc. It was a wonderful experience of learning with prolific exposure within a professional environment. It is an immense privilege for me to part of Allenhouse Group of Institutions.

Saransh Batham
B.Tech (CSE)



The entire faculty and department leaves no stone unturned to shape one's future. My four years at Allenhouse have been a wonderful experience of learning with prolific exposure to outside.

Anshika Singh
B.Tech (CSE)

Success comes with hardwork & right guidance.. That's the reason, I would like to thank my faculty members & Training & Placement cell for always guiding me & keeping me motivated. Allenhouse has helped me improve my Interpersonal Skills, Technical skills & overall personality development..

Suraj Vishwakarma
B.Tech- (CSE)

9th Convocation- Batch 2021

Our achievers with Multiple Job offers

Bhavya Mehrotra
B.Tech (CSE)

Anshika Singh
B.Tech (CSE)

Piyush Trivedi
B.Tech (CSE)

Anshuman Pratap
B.Tech (CSE)

Nikhil Sahu
B.Tech (CSE)

Sonal Gupta
B.Tech (CSE)

Shivam Singh
B.Tech (CSE)

Tuba Khalid
B.Tech (CSE)

Ankita Tiwari
B.Tech (CSE)

Abhay Chaurasia
B.Tech (CSE)

Gaurav Singh Pal
B.Tech (CSE)

Anas Ali
B.Tech (CSE)

Mohd Danish
B.Tech (CSE)

Anamta Aftab
B.Tech (CSE)

...and many more