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Blockchain AVENIR

IMI INTERNATIONAL MANAGEMENT INSTITUTE KOLKATA

Aligning Management Education with Disruptive Technologies

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In this present VUCA world, it is important for students and educational institutions to align themselves with the upcoming and disruptive technologies for not only staying ahead of the competition but also to sustain in the long run. One such disruptive technology is the blockchain technology which has shown its impact on the financial segment and is crawling its way into other segments like, supply chain management, marketing, and even human resource. With the primary focus on improving traceability, transparency, security, and trust among the end users, blockchain technology can help to streamline several processes that have been a cause of concern, for several organizations operating in different domains. As the industries are working on incorporating such emerging technologies in their daily operations, it is important for students to upgrade their knowledge and skills so that they can be industry ready. To have a competitive edge in the workforce, management students also need to upgrade themselves with the latest tools and technical skillsets. In addition to their managerial skills, the technical skills will help management students ascend the career ladder.

IMI Kolkata takes pride in having a set of highly experienced faculty members who facilitate the students' understanding of the latest technologies and how the technologies can equip them as a manager.

IMI Kolkata also looks forward to collaborating with industry experts and organizations who are working with emerging technologies. Our partnership with the Bharat Blockchain Network initiative, organized by IDS in collaboration with AICTE, is one such example. As we work towards making the students at IMI Kolkata understand the importance of blockchain and its applications in different domains, the Bharat Blockchain Yatra event is the first stepping-stone. IMI Kolkata takes pride in being the first Management Institute in India as well as the first Institute in the Eastern Region of India, that is organizing the prestigious Bharat Blockchain Yatra Event in campus. In future, we look forward to the Blockchain Experts visiting our campus and sharing their experience and knowledge with our students.

Blockchain Yatra Event at IMI-Kolkata

Shri Sudharshan Reddy Minumula
CEO, Information Data Systems (IDS)

Shri Voruganti Aravind
Global VP -Information Data Systems (IDS)
Head of Product - Polyversity Metaverse & Bharat Blockchain Network

We at Information Data Systems (IDS) are thrilled to unveil Bharat Blockchain Yatra, India's first of it's kind tech tour focused on Web3 and Blockchain, dedicated to narrating India's remarkable Blockchain Story and shifting the narrative from hype to value creation. Get ready to embark on an awe-inspiring journey that spans 25 series of events, spreading its wings across 18 states, showcasing the true potential of blockchain technology.

This unique platform brings together 200+ exceptional speakers and panelists, including Blockchain policymakers, industry leaders, blockchain architects, and esteemed researchers from academia. They will share their experiences and insights, shedding light on their groundbreaking work in blockchain initiatives, products, and solutions.

Join us as we explore the transformative power of blockchain technology in both FinTech and Non-FinTech sectors. From Programmable Money and Payments to Capital Markets and Digital Asset Tokenization, from Manufacturing, Supply Chain & Logistics to Energy and Sustainability, from E-Governance (GRC) to Entertainment & Media, and beyond, we will delve deep into a myriad of industry verticals. Together, we will revolutionize sectors, shift paradigms, and unlock new possibilities.

We are thrilled to join hands with IMI Kolkata as part of Bharat Blockchain Yatra. This event will create a vibrant platform for the Blockchain Ecosystem in West Bengal to share their stories and experiences, fostering cross-learning and collaboration. We believe this partnership will play a crucial role in driving blockchain innovation in the region and contribute to India's leadership in the global blockchain space.

Selected Latest Happenings

- Web3 startup Airchains partners with West Bengal's government institution (Source: Forbes India)
- Scientists create a crypto portfolio management AI trained with on-chain data (Source: cointelegraph.com)
- EU blockchain sandbox unveils first 20 use cases after wave of applications (Source: cointelegraph.com)
- Compound Founder's New Venture Superstate To Bridge Traditional and Blockchain Finance (Source: https://blockchain.news/news/)
- China to train half a million blockchain experts amid national research centre launch (Source: https://www.blockchaintechnology-news.com/2023/)

Bharat Blockchain Chapter at IMI-K

Dr. Arghya Ray
Assistant Professor (Analytics)
Chair (Bharat Blockchain
Network Chapter – IMI-K)

The benefits of blockchain are not just limited to cryptocurrencies like Bitcoin. Modern day experts feel that the blockchain technology has the potential to disrupt almost every domain. Apart from the financial segment, blockchain finds its use in the supply chain, human resource management, digital marketing, land registration and many more. If built properly, blockchain technology can even transform government services. This highlights the importance of blockchain technology in this present era and thus a knowledge of blockchain will help students stay ahead in the competition.

IMI-Kolkata is an Academic Partner of the Bharat Blockchain Network (BBN) initiative which is powered by Information Data Systems Private Limited (IDS) and is supported by All India Council for Technical Education (AICTE). With the focus on aligning the skill-set of management students with the latest technologies, the partnership with IDS and the BBN helps the students of IMI-Kolkata to get a closed community access for peer-to-peer learning, 15 hours Blockchain Bootcamp Course, Industry talks, networking, and mentoring support from Blockchain practitioners and mentors. Moreover, IMI-Kolkata aims to start offering Blockchain services and Certified educational courses on the IDS BBN platform enabling mass audience reach to other institutes or students. In future, IMI-Kolkata also aims to attract Blockchain consulting projects and enable Blockchain research and PhDs with the support of IDS. IMI-Kolkata also looks forward to have a virtual presence in the BBN's Educational Metaverse (Polyversity) environment which will help to make education more accessible, immersive, and meaningful.

Industry Expert Column

Blockchain in Education

Gopal Krishna G S S
Country Head Market Function
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Quality education is an essential part of the Sustainable Development Goals (SDGs), which aims to ensure inclusive and equitable access to education and promote lifelong learning opportunities for all. As technology advances, it profoundly affects every sector, including education. Blockchain technology is no different. With every passing day, blockchain is emerging as the mainstream of this technological evolution.

If we talk specifically about the education sector, as per Business Research Insights, the global blockchain market size in education in 2021 was USD 118.7 million and is expected to grow at a CAGR of 43.94% to reach USD 1.05 billion by 2028.

Advantages of blockchain in education include:

- **Security:** Blockchain is a very secure technology, as it is difficult to hack or change data that is stored on a blockchain. This makes it ideal for storing sensitive student data, such as grades, and transcripts.
- **Transparency:** Blockchain is a transparent technology, as all transactions that are recorded on a blockchain are visible to everyone on the network. This makes it easy to track the history of a student's academic record and to ensure that there is no fraud.
- **Immutability:** Blockchain is an immutable technology, which means that once data is stored on a blockchain, it cannot be changed or deleted. This makes it ideal for storing records that need to be preserved for extended periods of time, such as diplomas and transcripts.

Use cases of blockchain technology are:

- **Storing and verifying academic credentials:** Blockchain can be used to store and verify academic credentials, such as degrees, diplomas, and transcripts. This can make it easier for employers and educational institutions to verify the authenticity of credentials, and it can also give students more control over their own academic records.
- **Providing secure data sharing:** Blockchain can be used to provide secure data sharing between educational institutions and other stakeholders, such as employers, students, and parents. This can help to improve collaboration and communication, and it can also help to protect student data.
- **Creating a more transparent education system:** Blockchain can be used to create a more transparent education system. This can be done by tracking student progress, grades, and other data on the blockchain. This can help to ensure that students are getting the education they deserve, and it can also help to prevent fraud and corruption.

Blockchain in education is not just a concept, organizations have started implementing use cases.

- **Blockcerts** is a project that uses blockchain to create digital certificates that are tamper-proof and easily verifiable. Blockcerts is being used by a number of educational institutions, including the University of Nicosia and the University of California, Berkeley.
- **Credly** is a company that provides a platform for issuing and verifying digital credentials. Credly's platform is used by a number of educational institutions, as well as by employers and other organizations.
- **Sovrn** is a company that is using blockchain to create a decentralized marketplace for educational content. Sovrn's platform allows educators to sell their content directly to students, without having to go through a third party.

Blockchain has the potential to revolutionize education by making it more secure, transparent, and efficient. Blockchain technology can be used to store student records, track academic progress, and manage payments. It can also be used to create decentralized learning platforms and to provide students with access to a wider range of educational resources.

Blockchain: Embracing the Future

Kumar Ravi
Heads investments Segment at
Momentum6's Web 3.0 accelerator.
Ex-Director at OCG Technology

Breaking Down the Blockchain

At its core, a blockchain is a shared, decentralized digital ledger. Imagine a public spreadsheet duplicated across numerous computers, constantly

updating as new transactions or 'blocks' append to the existing 'chain'. The main strength of blockchain is its unique solution to digital trust. While traditional transactions need intermediaries like banks or corporations to verify, blockchain relies on its network of nodes, cutting down trust-keeping costs from an average 9% to less than 2%.

Web 3.0: The Next Internet Age

Web 3.0 or the 'semantic web' prioritizes a more intuitive, user-centric web experience. It empowers users with data ownership, fostering collaborative business models where users can shift freely between various protocols and products.

From Bitcoin's inception in 2009 to today's myriad uses, blockchain has democratized finance through DeFi, digital ownership via NFTs, and has sparked the creation of decentralized autonomous organizations (DAOs) which are blockchain-based entities that operate without centralized control, enabling democratic decision-making and transparent operations.

AI and Web 3.0: Converging Forces

Far from undermining each other, AI and Web 3.0 are two tech giants that are fusing to form a smarter, decentralized web, with AI networks operating independently on the transparent, secure data management system provided by blockchain.

Embracing the Future

Blockchain holds immense potential to enhance personal and business capabilities, offering secure transactions, income opportunities through DeFi, and digital asset creation via NFTs. By understanding and harnessing its convergence with AI and Web 3.0, individuals and businesses can secure an unprecedented competitive edge in this internet era.

Academicians' Viewpoint

Blockchain in Healthcare

Dr. Vinaytosh Mishra
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Blockchain technology has the potential to revolutionize the healthcare industry by enhancing security, transparency, and interoperability. Unlike many other digital technologies, blockchain is more than just hype and has demonstrated valuable use cases in healthcare. One of the primary applications of blockchain is the management of medical information, which can significantly increase transparency in health financing and facilitate international insurance, thereby promoting medical tourism. For instance, by implementing blockchain-enabled Electronic Health Records, the manipulation of records can be prevented, ensuring that the benefits of programs like Ayushman Bharat PM-JAY reach the intended recipients.

Blockchain also enables the use of smart contracts, reducing the cash-to-cash cycle of hospitals participating in Ayushman Bharat and enhancing their efficiency. Additionally, blockchain can be employed to trace medicines from their origin to the end consumer, effectively eliminating the risk of counterfeit drugs. During the recent pandemic, we witnessed the usefulness of blockchain in applications such as vaccine passports and contact tracing. Another notable use case of blockchain is in decentralized clinical trials, where patient records are shared across different locations. Ensuring the privacy and security of patient health records becomes paramount in such scenarios, and utilizing blockchain for storing the reporting of ethical review boards makes it challenging to manipulate patient data at a later stage.

These examples represent just a fraction of the successful use cases of blockchain in healthcare. Blockchain can also introduce transparency to the healthcare supply chain, addressing long-standing issues like the bullwhip effect and further improving overall efficiency. As technology processes and evolve, we can expect to witness even more innovative use cases that enhance patient outcomes, streamline processes, and fortify data security in the healthcare industry.

Blockchain: A pavement of opportunities

Dr. Abhishek Behl
Assistant Professor (Area Lead – Information Management) MDI Gurgaon

The financial sector is witnessing a wave of transformation. Disruptive technologies are rewiring the traditional financial models, ecosystems, and dynamics of financial markets. The advent of smart contracts, decentralized autonomous organizations (DAOs), and distributed ledger technologies have given birth to the modern alternative financial system, i.e., Decentralized Finance (DeFi). While its popularity is yet to be capitalized by the market, its applicability has been explored in multiple disciplines like real estate, and art forms. The growth of businesses around non-fungible tokens (NFT) is yet another example that makes an important and critical use case of blockchain technology (BCT). It has been an increasingly popular trend to use blockchain technologies with IoT. They provide a distributed and cryptographically secure chain of data blocks, allowing for an immutable data trail that guarantees the ownership of data and the privacy of users. As NFTs are blockchain-based virtual assets that have gained investor interest within a short time. An NFT refers to a unit of digital information or a token stored on a blockchain that does not inherently cannot be exchanged for another digital asset. The value of the NFT comes from its non-fungible nature. Unlike fungible coins i.e. one coin of any cryptocurrency like Bitcoin, ether has the same value as the other coin, NFTs are not the same. One NFT is unlikely to hold the same value as another NFT. An extension of the application of BCT-based NFT is gaming. With the growing popularity of gaming, there lies a critical concern about exchanging and trading virtual currencies and assets. This issue can be resolved with BCT's intervention which would then help gamers and businesses work together to understand the trade and worth of virtual currencies. Another application of BCT is education which is currently the most redundant area which is rarely harnessing the power of BCT. As global education goes online and with digital transformation and open access platforms encourage learning over formal education, BCT can act as a bridge to hold records and performance of learners across age groups and geographies. This would then be useful for higher education institutes and also firms that offer jobs to students based on their verified skills and education. Currently, while there is digital transformation that is changing the education landscape, it is still too nascent to understand trust and transparency when it comes to understanding the skills of people. BCT can come in as a savior here. Lastly, BCT has a huge potential in the market that promotes renting and second-hand products. The business of renting and repurchasing relies heavily on trust which is often difficult to measure and capture. Decentralization of the process and the outcome of renting and repurchasing could be made effective given digital contracts, asset tracking, and dispute resolution can be resolved easily with more detailed information at hand. Moreover, it will promote the cycle and chain of usage of products that would further control identity fraud.

Articles from Students

From Beat to Block: Harnessing Blockchain for a New Era of Music

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Batch 2022-2024

Blockchain technology is revolutionizing various industries, and the music industry is no exception. The decentralized, transparent, and irreversible ledger that blockchain may offer will make it simpler to track music rights and royalty payments. This may greatly eliminate conflicts and guarantee that artists are paid appropriately for their work. Blockchain enables musicians to release music quickly and earn more money for their efforts in the business by providing transparency and lawful ownership of their songs. Artists can tokenize their work and sell it directly to fans as NFTs (Non-Fungible Tokens). This not only provides a new revenue stream but also creates a closer connection between artists and fans. Blockchain can enable a peer-to-peer music distribution system, eliminating the need for intermediaries like record labels and streaming platforms. This could result in higher profits for artists.

Imogen Heap, a musician, and performer, launched the nonprofit blockchain-based music research and development platform Mycelia in 2015. It is designed to give musicians more control over their songs and earnings. Mycelia was established to become a more ethical music firm by guaranteeing that all musicians receive fair compensation and full recognition, establishing new moral and technological standards for the sector, and releasing new possibilities for musical artists by developing a new market for goods and services. Imogen Heap's latest invention, the Creative Passport, promises to assist in resolving some problems. Musicians may manage information about themselves and other parts of their works to share with others using Creative Passport, a digital, validated ID. The owners of the song are the only ones who benefit financially from the artists' Creative Passports.

Mycelia has done a great job of raising awareness about the potential of blockchain technology in the music industry. It has sparked a global conversation on the topic, encouraging artists, fans, and industry professionals to rethink existing business models. Since its inception, numerous artists and industry players have shown interest in Mycelia's vision. This is a positive sign that the industry is open to change. The music industry is complex and change takes time. But Mycelia is certainly paving the way for a more equitable future for artists.

Blockchain is Transforming the Virtual Tourism Industry

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The virtual tourism industry has witnessed significant growth in recent years, providing people with immersive experiences and the ability to explore new destinations without leaving their homes. As this industry continues to evolve, blockchain technology has emerged as a transformative force, revolutionizing the way virtual tourism operates.

Enhanced Security and Trust:

By leveraging decentralized networks and cryptographic protocols, blockchain ensures the integrity and immutability of data. This technology enables secure transactions, protects sensitive user information, and minimizes the risk of fraudulent activities. Travelers can have confidence in their virtual bookings and transactions, fostering trust within the industry.

Easy, safe, and traceable payments:

The primary benefit worth mentioning when it comes to payments is that Bitcoin payments will be a lot more secure and traceable. All transactions made on the blockchain, are permanently recorded in the chain and cannot be changed. Additionally, because it is a decentralized system, there won't be any middlemen who could obstruct or postpone payment.

Decentralized Reputation and Review Systems:

This enables transparent and trustworthy feedback within the virtual tourism ecosystem. By recording user reviews and ratings on the blockchain, the authenticity, and reliability of feedback are ensured. Travelers can access genuine and un-manipulated reviews, making informed decisions about virtual destinations and experiences. This decentralized reputation system contributes to building a community of trust and credibility.

Blockchain technology is revolutionizing the virtual tourism industry, unlocking new horizons for travellers and content creators alike. Through enhanced security, transparency, and verifiability, blockchain enhances trust and credibility within the virtual tourism ecosystem. As the virtual tourism industry continues to grow, the transformative power of blockchain will pave the way for innovative experiences, forging new connections between travellers and virtual destinations.

Companies Offering Blockchain Roles:

- Electron Labs (New Delhi, Delhi)
- Gloify (Bengaluru, Karnataka)
- Tech Mahindra (India)
- Rejolut (Mumbai, Maharashtra)
- Zensar Technologies (Pune, Maharashtra)
- Tech Alchemy (Pune, Maharashtra)
- Blockchain Council (Gurugram, Haryana)
- PAGO Analytics India Pvt Ltd. (Hyderabad, Telangana)

Meet the Team:

1. Dr. Mohua Banerjee (Director, IMI Kolkata)
2. Dr. Arghya Ray (Chair, BBN IMI-K) (Editor-in-Chief Blockchain Avenir)
3. Aman Agarwal (BBN Ambassador, IMI-K)
4. Parul Singh (BBN Ambassador, IMI-K)
5. Kiran Kumari Das (Editorial Board, Blockchain Avenir)
6. Ritankar Maity (Latest Happening Segment)
7. Souparna Das (Blockchain Roles Segment)
8. Vidushi Poddar (Logo Design)
9. IDS Team (Partner, BBN)