Computer Society of India™ Since 1965
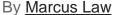
NASHIK CHAPTER: KNOWLEDGE SHARING SERIES: ARTICLE 650: 29 MAY 2023

Combining AI and blockchain for the future of data analytics

By Marcus Law

A recent survey from Deloitte found 86% of executives believe there's huge business potential in blockchain technology

Blockchain is on the rise, with a recent survey from Deloitte showing 86% of executives believe there's huge business potential in blockchain technology

No longer solely associated with cryptocurrencies, blockchain technology is now being harnessed in other industries, helping organisations gain insights from mountains of data.

Business runs on information. The faster it's received and the more accurate it is, the better. According to IBM, blockchain is ideal for delivering that information, providing immediate, shared and completely transparent information stored on an immutable ledger that can be accessed only by permissioned network members.

"A blockchain network can track orders, payments, accounts, production, and much more," IBM says. "And because members share a single view of the truth, you can see all details of a

transaction end-to-end, giving you greater confidence as well as new efficiencies and opportunities."

Today, businesses and governments across the world are adopting blockchain to fit their needs in everything from welfare management to voting records and tax calculation, with a recent survey from Deloitte finding that <u>86% of executives</u> believe there's huge business potential in blockchain technology.

Data and blockchain

A blockchain – as described by McKinsey & Company – is an encoded digital ledger stored on multiple computers in a public or private network, comprising data records, or 'blocks'. Once these blocks are collected in a chain, they cannot be changed or deleted by a single actor; instead, they are verified and managed using automation and shared governance protocols.

"A blockchain is a database that maintains a set of records that are protected against tampering or revisions," comments Mo Sahib, CEO of Borderless Security and FilesDNA. "In its simplest terms, imagine making multiple copies of a document. Each time the document is viewed, moved, or opened, it's compared with all the other scopes to ensure no changes or errors have been introduced. This all happens automatically without the need for human interaction. If someone attempts to change a document or access something they should not be accessing, those instances can be easily identified."

From product identifiers to medical records or land registries, blockchain and distributed ledger technologies are already functioning in many sectors. According to the World Economic Forum, <u>up to 10% of global GDP</u> could be stored on blockchains by 2025.

"We have never lived in a time with so many transformative technologies," says futurist and business advisor <u>Bernard Marr</u>. "Tech trends like ML, robotics, blockchain, and the metaverse are revamping every business in every industry."

Data is the lifeblood of successful companies, according to Marr, but this comes with a huge responsibility. "Companies must keep information safe and comply with all applicable security legislation. The companies that succeed in the future will need to have a solid strategy in place that makes the most of their data while protecting partners and customers."

"Blockchain has only been around for a little over 10 years and in that time it has been widely adopted across the financial sector and beyond," explains Sahib. "It offers better speed, accuracy, and security than was possible before its inception. Forbes has predicted a continued growth and evolution over the next 10 years. In 2021, the market was worth US\$4.9bn; by 2026, this is predicted to grow to <u>US\$67.4bn</u>.

"Growth like this has not been seen since the Dotcom boom in the 90s."

Securing IoT data

As IoT growth accelerates, there will simply be too many devices and too much data for human intervention. According to research by IDC, the amount of data generated by IoT devices is expected to reach 73.1 ZB (zettabytes) by 2025. And while big data technology is capable of processing and analysing large volumes of data, it does not provide security and trust.

"That's where blockchain comes in," comments Jonas Lundqvist, CEO at Haidrun. "As a distributed database or ledger technology, blockchain stores and manages data in so-called blocks, encrypted and linked together to form a chain. Each block also contains an immutable record of exactly when it was created, which can't be corrupted, lost, or changed without the network knowing about it."

With a public blockchain, anyone can download the peer-to-peer client software, view the ledger, and interact with the blockchain. This means that no single party has control over the massive amount of data the IoT devices generate, with Lundqvist claiming this makes it virtually impossible for anyone to compromise or corrupt data records.

"Public blockchains, however, were developed for, and largely associated with, cryptocurrencies and are designed to preserve an individual user's anonymity, treating all users equally," Lundqvist explains. "This means that when it comes to enterprise applications – including managing IoT ecosystems – the strength of public blockchains also becomes a weakness and poses several challenges around privacy and control."

For many enterprises, the idea of allowing every participant to have full access to the entire contents of the database does not sit well. "As a result, a new generation of private blockchain is emerging where a single authority or organisation ultimately retains control, and no one can enter this type of network without proper authentication," Lundqvist says.

"Some private blockchains can look more like centralised networks but they offer many, if not all, the distributed benefits. Any overall control they do retain helps to improve privacy and eliminate many of the illicit activities often associated with public blockchains and cryptocurrencies."

Blockchain powered by AI and ML

The foundation of blockchain technology, and the driving force behind its continuing evolution, is AI. The ever-improving fields of AI, coupled with ML, have helped keep blockchain up to speed with developments in hacking and cybercrime.

As Sahib explains, there are many benefits for businesses looking to move their data to digital storage and transmission systems. With modern document management systems files are easier to access and edit, searchable, automatically backed up and protected against illegal access and interference.

"AI and ML help automate a lot of time-consuming manual processes," Sahib explains. "When you scan or upload a document, AI systems can tag, save and store your files across multiple locations on a distributed network. When you want to access your file it will be easy to find, accessible to you remotely, and you can be sure that no unwanted changes have been made.

"AI systems are also capable of screening your documents for sensitive information. Thus ensuring this is properly flagged, secured and not shared unnecessarily," Sahib concludes. "The software can also be set up to detect and prevent unwanted access to certain files while leaving others open to wider viewing. This helps ensure that only your chosen users have access and helps identify any threats, inside or outside your organisation."

Video of The Week

Explore some related information to above article at following link.
https://www.youtube.com/watch?v=s48fT8H1uIs
https://www.youtube.com/watch?v=TCLhcyGhVEU
https://www.youtube.com/watch?v=xeaevi7W81U
https://www.youtube.com/watch?v=ogk4DnqXvuA
https://www.youtube.com/watch?v=yMFg02Ia3Kg

News of The Week

TESTING TIMES: WIPRO ASKS FRESHERS TO TAKE NEW TEST OR GET TERMINATED

This comes as freshers have been awaiting onboarding for more than a year now

Shivani Shinde

Wipro is in the news, again.

The information technology (IT) services company has mandated freshers, who had opted for a lower salary package of Rs 3.5 lakh per annum, instead of Rs 6.5 lakh per annum, clear a new training module titled Project Readiness Program (PRP) and score at least 60 per cent or stand terminated.

Wipro is not the only company to have implemented such a programme. IT services company LTIMindtree had introduced a similar training programme with the possibility of elimination if not successfully cleared.

In February, Wipro had asked fresh-faced graduates to join at a lower salary than they were eligible for. It had mandated they opt for a salary of Rs 3.5 lakh, from the Rs 6.5 lakh promised earlier, as projects in the higher salary package were not available any longer.

These graduates were asked to clear an assessment programme titled Velocity before being signed on in March.

"They are now being asked to undergo training again," said Nascent Information Technology Employees Senate (NITES) — an IT sector employee union working extensively for the welfare, rights, justice, and empowerment of IT, business process outsourcing, and knowledge process outsourcing professionals in India.

Calling Wipro's actions "unethical, unfair, and unjust", NITES President Harpreet Singh Saluja said, "In March 2022, before starting the unpaid Velocity training, the company's human resource department assured employees that if they completed the module, they would not have to undergo training again. After joining on March 30 this year, Wipro asked its employees to take another test."

In an email response, a spokesperson for Wipro said, "At Wipro, we place immense value on seeing our talent grow and succeed. The PRP is part of our routine onboarding process and designed to ensure that our next-generation (next-gen) associates are assigned to the right client projects and have the most up-to-date skillset to make an immediate impact."

The company did not respond to a query on why freshers who cleared the assessment were being tested again.

"This sudden change in Wipro's policy has left many of its new employees in a quandary. The company is playing with employee future. They have invested a year and a half at Wipro. The company's threatening approach that talks about termination is causing them immense stress and anxiety," said Saluja.

However, some of the senior executives of the company Business Standard spoke to confirmed that skilling and reskilling have been integral to Wipro.

"At every level, irrespective of the department, the employee has to clear regular assessment and skilling programmes. This has been happening for years now," said an executive.

According to the training instruction mail, PRP is a programme offered by Wipro's Talent Transformation to all campus and off-campus hires referred to as Next-Gen Associates (NGAs).

The broad objective of PRP is to equip NGAs with the requisite knowledge and skills that will enable them to start working on customer projects.

In January this year, the company laid off 425 new candidates as they fared poorly in these assessments.

TESTING TIMES

Wipro previously informed new hires who had completed the four-month-long Velocity training that they only had a Project Engineer job profile available at Rs 3.5 lakh per annum, and that if they accepted this offer letter, their prior offer letter at Rs 6.5 lakh per annum would be void

The union said that the freshers who accepted the job role for a lower package received a new offer letter with the joining date of March 30, 2023, to be onboarded on March 14, 2023

The company has now insisted that the employees undergo a new training programme after joining the company on March 30, 2023

E Toon

1. Feedback/Contribution of articles is appreciated at: nasikcsi@gmail.com

To know more about forthcoming programs and events, please do visit chapter website