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# Blockchain the future of Data Warehouse

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In traditional world, if you talk about blockchain then it is nothing but a sequence of some blocks connected to each other but In today's world, blockchain is having a very different meaning, Now in blockchain block means data (transactions) and chain means interconnection between these data blocks.

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## Introduction:

Blockchain is a concept, a technology to change the future of data handling. Blockchain is nothing but a chain of blocks(data) which is kept by multiple systems(nodes) connected to each other who are present in blockchain environment.

Blockchain is made to replace the centralize data systems or servers, means rather than keeping all our data centralised in a system or sever in blockchain we work on decentralised systems, in blockchain technology we have multiple systems(nodes) having the same copy of data(transactions) which are interconnected we each other and each node has the address (hash value) of other node connected

to it, so there is no need to have a centralised system or server to access any data.

When we talk about blockchain two things come in our mind first Satoshi Nakamoto, the person or group, no one know who he is or they are, Satoshi Nakamoto is the one who gave us the technology of blockchain. Second thing comes out in mind is Bitcoin, the first implementation of blockchain(a cryptocurrency) which is a huge success today.

Blockchain works 2 technologies, first is peer to peer network technology and second is hashing (also called digital signature for data block).



## Keywords

- Blockchain
- Technology
- Data Handling
- Cryptocurrency
- Network

Understanding the need of Blockchain in today's world:

We need blockchain because it reduces our dependence on centralised systems or servers to store the whole data, it allows us to store data in peer to peer network in the form of blocks which are connected to each other with digital signature (Hashing). For example in torrent we don't need any centralised server to store or access the data, there is a peer to peer network using which we can anytime store the data and access the data, also there is no chances of data loss due to high redundancy in multiple peers.

## Types of Blockchain

1. **Public:** Public blockchains are designed to be fully decentralised and no one individual or organization can have control over it, it can be accessed/Joined by anyone anywhere in the world.

- Private: There are the blockchains that are managed by individuals or organizations and they possess complete control over it, anyone who wants to join/access the network needs permission from them.
- Federated: It is a type of blockchain that combines the privacy benefits of a private blockchain and Transparency benefits of a public blockchain, For example if there is a group of companies that want to work together and share their data through blockchain, they can choose on which data to keep private and which data to share publicly.

#### Types of Blockchain Users

- Transactors: These are the users who made any change in the data or performed any transaction in the database. Like a movie upload on the torrent network.
- Miners: Miners are those users who secure and verify the transaction made by the transactors and add that data in all the blocks of blockchain. Miners also receive a reward, if they win the competition among miners to add the new transaction in the blockchain.

#### How Miners are selected

Competition are done on the basis of consensus algorithm, consensus algorithm is an algorithm consist of many techniques to select a single miner among a huge number of miners who will add the new node in blockchain.

Techniques in consensus algorithm:

- Proof of Work (PoW)
- Proof of Stake (PoS)

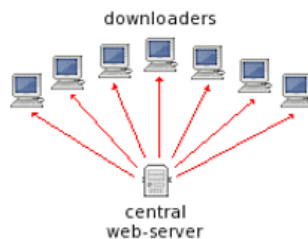
- Proof of Elapsed Time (PoET)
- Proof of Deposit (PoD)
- Proof of Concept (PoC)

Why to use blockchain is data warehousing?

In traditional Data warehouse techniques entire network is dependent on central server for data access even though we have back of the data it is either on the same machine or in the any nearby machine, so in case of any natural calamity or any power blackout there is high risk of losing the data.

But if we use a decentralised technology to store all the data then there are very less chances of data loss. This Technology is only possible if we use blockchain concept with Datawarehouse.

#### Traditional Centralized Downloading



- Slow
- Single point of failure
- High bandwidth usage for server

#### Advantages of using blockchain:

- Data Availability
- Redundancy
- High Security
- Transparency

#### Technology used in Blockchain:

- **Hashing:**  
It is used for security and as a digital signature in blockchain. It is also used as the link of previous node.

- **Cryptography:**

It is used to hide the users detail and maintain confidentiality or anonymity.

- **Consensus Algorithm:**

It is used to select a user(also called miner) to add the newly occurred transaction or node.

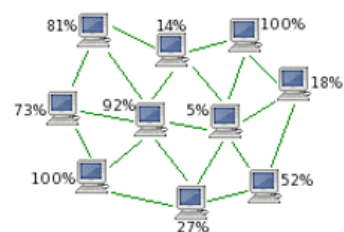
- **Peer to Peer Network**

It is used to create a mesh network of various clients (also called nodes) system that all act as data servers for each other like in torrent.

#### Conclusion:

As we saw the blockchain is the coming future in terms of database management, because no user wants his/her data in hands of any

#### Decentralized Peer-to-Peer Downloading



- Fast
- No single point of failure
- All downloaders are also uploaders

other person or group, so blockchain not only provides security but also reliability for user's data. In this article we show that how and why we should use blockchain's decentralised Technology over other centralised technology for data warehousing which is the main aspect of our research in further articles.

#### References

- <https://bitcointalk.org/index.php?topic=1960454.0>
- <https://www.facebook.com/gobchain/posts>
- <https://twitter.com/gobchain>
- <https://www.linkedin.com/pulse/blockchain-explained-beginners-simran-kaur-product-manager-intern-1d>

- <https://books.google.ca/books?id=RjjlCwAAQBAJ&pg=PA85&lpg=PA85&dq=%22data+but+if+we+use%22&source=bl&ots=NMAZoadWIO&sig=ACfU3U3BhEVqT9FVQhdqzRrB0Y0ivUdola&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwA3oECAkQAQ>
- [https://books.google.ca/books?id=NR1tAAAQBAJ&pg=PA251&lpg=PA251&dq=%22data+but+if+we+use%22&source=bl&ots=Pubqdz32Ea&sig=ACfU3U2mM8752YQHfjgrx3S\\_8U5cHfWguw&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAXoECAoQAQ](https://books.google.ca/books?id=NR1tAAAQBAJ&pg=PA251&lpg=PA251&dq=%22data+but+if+we+use%22&source=bl&ots=Pubqdz32Ea&sig=ACfU3U2mM8752YQHfjgrx3S_8U5cHfWguw&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAXoECAoQAQ)
- <https://forums.developer.apple.com/thread/119173>
- [https://books.google.ca/books?id=AfcxDwAAQBAJ&pg=PA40&lpg=PA40&dq=%22data+but+if+we+use%22&source=bl&ots=lq4CzSpdB&sig=ACfU3U36\\_xtVh8QEonqFwkzoqUj17KMXA&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAgQAQ](https://books.google.ca/books?id=AfcxDwAAQBAJ&pg=PA40&lpg=PA40&dq=%22data+but+if+we+use%22&source=bl&ots=lq4CzSpdB&sig=ACfU3U36_xtVh8QEonqFwkzoqUj17KMXA&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAgQAQ)
- [https://books.google.ca/books?id=vrkrDwAAQBAJ&pg=PA337&lpg=PA337&dq=%22data+but+if+we+use%22&source=bl&ots=Nydl8Kjs-c&sig=ACfU3U2\\_1JRVW8IE3nlowzNFwk3n5zcoQQ&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAgQAQ](https://books.google.ca/books?id=vrkrDwAAQBAJ&pg=PA337&lpg=PA337&dq=%22data+but+if+we+use%22&source=bl&ots=Nydl8Kjs-c&sig=ACfU3U2_1JRVW8IE3nlowzNFwk3n5zcoQQ&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAgQAQ)
- <https://books.google.ca/books?id=UPFsDwAAQBAJ&pg=PA24&lpg=PA24&dq=%22types+of+blockchain+public+public%22&source=bl&ots=rLa7G5rOZ2&sig=ACfU3U0B54A-st9wPmN2bCu1Y0FbHOWCAA&hl=en&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAgQAQ>
- <https://docs.python.org/3/library/statistics.html>
- <https://www.middlegate.co.uk/makes-internet-addiction-issue/>
- <https://patsy.readthedocs.io/en/latest/stateful-transforms.html>
- <https://www.coursehero.com/file/p1hoocj/Hello-Swapna-I-do-agree-that-advantages-outweigh-the-disadvantages-But-we/>
- <https://www.businessinsider.com/what-happens-when-your-lidger-cramps-up-2015-5/lightbox?r=AU&IR=T>
- <https://books.google.co.il/books?id=hrXW61hWzCAC&pg=PA53&lpg=PA53&dq=%22control+over+it+it+can%22&source=bl&ots=VXvsIYoxDV&sig=ACfU3U3Zs2tpd2XvjCdnf80k4QLGPeK Yw&hl=iw&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYYwaC2kQ6AEwAHOECAoQAQ>
- <https://answers.sap.com/questions/12415675/abap-doubt-routines.html>
- [https://books.google.cz/books?id=zKQMBwAAQBAJ&pg=PA369&lpg=PA369&dq=%22of+the+data+it+is%22&source=bl&ots=90XAohQcgg&sig=ACfU3U1WSXMXdVt2Zf39rSxxQDt\\_ZSoRWA&hl=cs&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYS3PDDsQ6AEwAHOECAkQAQ](https://books.google.cz/books?id=zKQMBwAAQBAJ&pg=PA369&lpg=PA369&dq=%22of+the+data+it+is%22&source=bl&ots=90XAohQcgg&sig=ACfU3U1WSXMXdVt2Zf39rSxxQDt_ZSoRWA&hl=cs&sa=X&ved=2ahUKEwi3wt2sv6vnAhVRZc0KHYS3PDDsQ6AEwAHOECAkQAQ)
- <https://books.google.cz/books?id=zBzZYe9n--EC&pg=PA443&lpg=PA443&dq=%22of+the+data+it+is%22&source=bl&ots=3z35RjglD9&sig=ACfU3U1h6SNytTxMiaawLYCccBgzqe>
- <eFSw&hl=cs&sa=X&ved=2ahUKEwiKsZWvv6vnAhXJct8KHS3PDDsQ6AEwC3oECAAsQAQ>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6206790/>
- [https://books.google.cz/books?id=Wd8JAAAQBAJ&pg=PA33&lpg=PA33&dq=%22of+the+data+it+is%22&source=bl&ots=wtMHEN3NAP&sig=ACfU3U3rTiWN\\_vdt3vGp5RiOs2bxsGplgA&hl=cs&sa=X&ved=2ahUKEwiKsZWvv6vnAhXJct8KHS3PDDsQ6AEwCnoECAgQAQ](https://books.google.cz/books?id=Wd8JAAAQBAJ&pg=PA33&lpg=PA33&dq=%22of+the+data+it+is%22&source=bl&ots=wtMHEN3NAP&sig=ACfU3U3rTiWN_vdt3vGp5RiOs2bxsGplgA&hl=cs&sa=X&ved=2ahUKEwiKsZWvv6vnAhXJct8KHS3PDDsQ6AEwCnoECAgQAQ)
- <https://www.okadoc.com/blog/disease-illnesses/narcolepsy-symptoms-and-how-to-avoid-it/>
- <https://www.publicsafety.gc.ca/cnt/ntnl-scrtr/cbr-scrtr/cbrllng/prnts/prvnt-cbr-llng-en.aspx>
- <https://ideas.ted.com/why-we-should-all-care-about-encryption-really/>
- <https://community.alteryx.com/t5/Alteryx-Designer-Discussions/Grouped-out-by-the-contents-of-the-data-it-is-linked-to/td-p/428711>
- <https://books.google.cz/books?id=VEERDwAAQBAJ&pg=PT120&lpg=PT120&dq=%22of+the+data+it+is%22&source=bl&ots=MAu27IRHju&sig=ACfU3U3FkOe3igj1ardwWY7TvvDTEI8JnQ&hl=cs&sa=X&ved=2ahUKEwiKsZWvv6vnAhXJct8KHS3PDDsQ6AEwCXoECAwQAQ>
- [https://www.newvision.co.ug/new\\_vision/news/1163741/doctor](https://www.newvision.co.ug/new_vision/news/1163741/doctor)
- <https://en.wikipedia.org/wiki/Metadata>
- [https://en.wikipedia.org/wiki/Robust\\_statistics](https://en.wikipedia.org/wiki/Robust_statistics)
- <https://books.google.co.il/books?id=ubZDDwAAQBAJ&pg=PA225&lpg=PA225&dq=%22control+over+it+it+can%22&source=bl&ots=pFc1QC4Rk0&sig=A CfU3U33vRhgMClcw8r9M02jA9GNM R2nZA&hl=iw&sa=X&ved=2ahUKEwiToCuv6vnAhVgThUIHfW0AkkQ6AEwAXoECAkQAQ>
- <https://drawntolife.fandom.com/wiki/Shadow>
- [https://www.researchgate.net/post/Is\\_it\\_better\\_to\\_use\\_the\\_mean\\_or\\_median\\_in\\_describing\\_central\\_value\\_tendency\\_of\\_a\\_given\\_population\\_sample](https://www.researchgate.net/post/Is_it_better_to_use_the_mean_or_median_in_describing_central_value_tendency_of_a_given_population_sample)
- [https://www.priv.gc.ca/media/3596/tips\\_e.pdf](https://www.priv.gc.ca/media/3596/tips_e.pdf)
- <https://svrtechnologies.com/top-55-ibm-blockchain-interview-questions-pdf/>
- <https://www.slideshare.net/Ferdinando1970/bitcoin-blockchain-and-distributed-ledger-technology-hype-or-reality-78852962>
- <https://bitcoinmagazine.com/articles/op-ed-what-do-we-mean-when-we-talk-about-blockchain-ecosystem>
- <https://books.google.com/books?id=5X-jADwAAQBAJ&pg=PA2&lpg=PA2&dq=%22consensus+algorithm+consensus+algorithm+is%22&source=bl&ots=fZwrMVqvc6&sig=ACfU3U0ezMHZ2C06imadw3je1OP3XjaXtg&hl=en&sa=X&ved=2ahUKEwiqJGxv6vnAhXRrs1kKHScOAqEQ6AEwA3oECAkQAQ>
- <https://thewallmagazine.ru/authors-rights-models-marie-christine-janssens/>
- <https://patents.google.com/patent/WO2015106284A1/en>
- [https://books.google.com/books?id=HCpjDwAAQBAJ&pg=PA210&lpg=PA210&dq=%22consensus+algorithm+consensus+algorithm+is%22&source=bl&ots=in9moSf1Ql&sig=ACfU3U1P803ioeXWb5Kz3C1oixiUY7\\_rqA&hl=en&sa=X&ved=2ahUKEwiqJGxv6vnAhXRrs1kKHScOAqEQ6AEwBnoECAoQAQ](https://books.google.com/books?id=HCpjDwAAQBAJ&pg=PA210&lpg=PA210&dq=%22consensus+algorithm+consensus+algorithm+is%22&source=bl&ots=in9moSf1Ql&sig=ACfU3U1P803ioeXWb5Kz3C1oixiUY7_rqA&hl=en&sa=X&ved=2ahUKEwiqJGxv6vnAhXRrs1kKHScOAqEQ6AEwBnoECAoQAQ)
- <https://qz.com/1538524/what-do-we-mean-when-we-talk-about-blockchain-anyway/>
- <https://www.ibm.com/blogs/blockchain/2019/08/looking-at-how-the-next-ten-years-of-block-chain-can-change-lives/>
- <https://qz.com/co/1412912/what-do-we-mean-when-we-talk-about-blockchain-anyway/>
- <https://patents.justia.com/patent/20190005504>
- <https://www.nasdaq.com/articles/op-ed-what-do-we-mean-when-we-talk-about-blockchain-ecosystem-2018-02-26>
- <https://books.google.com/books?id=SZaSDwAAQBAJ&pg=PA206&lpg=PA206&dq=%22consensus+algorithm+consensus+algorithm+is%22&source=bl&ots=HcRlqSYCEw&sig=ACfU3U2jrMrLvj11iNkWSk3kr6pvtUw&hl=en&sa=X&ved=2ahUKEwiqJGxv6vnAhXRrs1kKHScOAqEQ6AEwBHOECAgQAQ>
- <https://blog.theabacus.io/what-we-talk-about-when-we-talk-about-blockchain-technology-4f7a6a0dc03>
- [https://books.google.com/books?id=nK\\_cyxiwff0C&pg=PA2319&lpg=PA2319&dq=%22of+data+transactions+which+are%22&source=bl&ots=MzD4ZimY4F&sig=ACfU3U2ZZx5\\_FZ\\_iFRZT2v7YgMt\\_GxBXhg&hl=en&sa=X&ved=2ahUKEwjht4q1v6vnAhWJLc0KHacvBDQO6AEwAHOECAoQAQ](https://books.google.com/books?id=nK_cyxiwff0C&pg=PA2319&lpg=PA2319&dq=%22of+data+transactions+which+are%22&source=bl&ots=MzD4ZimY4F&sig=ACfU3U2ZZx5_FZ_iFRZT2v7YgMt_GxBXhg&hl=en&sa=X&ved=2ahUKEwjht4q1v6vnAhWJLc0KHacvBDQO6AEwAHOECAoQAQ)
- [https://www.researchgate.net/publication/332533913\\_Blockchain\\_in\\_Healthcare\\_Challenges\\_and\\_Solutions](https://www.researchgate.net/publication/332533913_Blockchain_in_Healthcare_Challenges_and_Solutions)
- <https://finance.yahoo.com/news/op-ed-mean-talk-blockchain-194930595.html>
- <https://www.steemleo.com/@shortsegments/your-business-on-the-blockchain-collaboration-with-competitors>
- <https://www.facebook.com/officialholders/videos/466090954118283/>
- <https://patentimages.storage.googleapis.com/0f/4c/43/a9a38e1aa86c9c/US5003384.pdf>
- [https://www.aemo.com.au/-/media/Files/Gas/Retail\\_Markets\\_and\\_Metering/Market-Procedures/SA\\_and\\_WA/Specification-pack/SAWA-Interface-Control-Document.pdf](https://www.aemo.com.au/-/media/Files/Gas/Retail_Markets_and_Metering/Market-Procedures/SA_and_WA/Specification-pack/SAWA-Interface-Control-Document.pdf)
- [https://en.wikipedia.org/wiki/Extensional\\_and\\_intensional\\_definitions](https://en.wikipedia.org/wiki/Extensional_and_intensional_definitions)
- [https://en.wikipedia.org/wiki/Begging\\_the\\_question](https://en.wikipedia.org/wiki/Begging_the_question)
- <https://puzzling.stackexchange.com/questions/93103/it-is-a-type-of-material>
- [https://www.ourcommunity.com.au/tech/tech\\_article.jsp?articleId=74](https://www.ourcommunity.com.au/tech/tech_article.jsp?articleId=74)
- [https://books.google.com/books?id=SyQzAQAAMAAJ&pg=PA658&lpg=PA658&dq=%22it+is+a+type+of%22&source=bl&ots=d0YsHm6H\\_W&sig=ACfU3U27b07DxK2pHlpWRIVzyz9HvgrUeQ&hl=en&sa=X&ved=2ahUKEwilhee8v6vnAhVRTt8KHTH-C84Q6A](https://books.google.com/books?id=SyQzAQAAMAAJ&pg=PA658&lpg=PA658&dq=%22it+is+a+type+of%22&source=bl&ots=d0YsHm6H_W&sig=ACfU3U27b07DxK2pHlpWRIVzyz9HvgrUeQ&hl=en&sa=X&ved=2ahUKEwilhee8v6vnAhVRTt8KHTH-C84Q6A)



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**Akshansh Kumar** is a final year graduation Student, persuing BCA from Amity University, he has a keen interest in technology and is eager to learn new things, he is particularly good in programming languages like C++ and Python, apart from academics he believes in utilizing classroom knowledge in real world, he is an also a member of Google bug hunter Hall of Fame.Special thanks to Dr.Rajbala Simon for trusting him and giving him the opportunity to write an article for the Cybernomics 2020 with the title "Blockchain: the future of Data Warehousing.

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### Annexure I

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#### Urkund Analysis Result

**Analysed Document:** Blockchain the future of Datawarehouse.docx (D63201400)  
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Sources included in the report:

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### Reviewers Comment

**Review 1:** The paper has very well explained on the basics of blockchain.

**Review 2:** Even though blockchain is on the rise, it's hardly the only knowledge that's straining existing storing systems. Artificial Intelligence (AI), and chiefly the Internet of Things (IoT), are also stimulating the current boundaries of storage.

**Review 3:** The Data is a big deal in the digital world. With the advent of new skill such as artificial intelligence and the internet of things, gen is being charmed out at unimaginable rates.



### Editorial Excerpt

This article has 0% plagiarism which is accepted as per the standards of publication for the magazine. the comments related to this manuscript are noteworthy to the theme "**Blockchain as the Future of Data Warehouse**". Blockchain and Big Data are among the top developing skills tipped to revolutionize several industries, fundamentally changing the way businesses and administrations are run. One might undertake that these technologies are mutually exclusive each imitating sole paths and applied self-governing of one another. After captivating review from many blind reviewers and editorial boards' remarks the article has been finalised to publish and categorise under "**View Point (VP)**" category.

### Acknowledgement

I specially thanks to Dr. Rajbala Simon for trusting me and giving him the opportunity to write an article for the Cybernomics 2020 with the title "**Blockchain the future of Datawarehouse**."

### Disclaimer

All views expressed in this paper are my/our own. Some of the content is taken from open source websites & some are copyright free for the purpose of disseminating knowledge. Those some We/I had mentioned above in the references section and acknowledged/cited as when and where required. The author/s has cited their joint own work mostly, Tables/Data from other referenced sources in this particular paper with the narrative & endorsement has been presented within quotes and reference at the bottom of the article accordingly & appropriately. Finally some of the contents which are taken or overlapped from open source websites for the knowledge purpose. Those some of i/ we had mentioned above in the references section.



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