Deep Dive on BLOCKCHAIN Journey

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Welcome to the Journey of Deep Dive on BlockChain

- BlockChain understanding baseline and reviewing the basics
- Why BlockChain?
- Cryptography and its association with BlockChain
- Where is BlockChain being used today?
- What is on a BlockChain?
  - Distributed Ledger
  - What is a Block?
  - Nonce
  - Genesis Block
  - Provenance
  - Consensus (Proof of Work/Proof of Stake)
- Types of BlockChain
- When not to use BlockChain
- The future of BlockChain
- DEMO: Learning BlockChain by Building one

Why are we here?

- Why do I want to learn BlockChain?
- Do I Want to make BlockChain my career?
- What do I want by the time I leave this place?
- How deep I want to go for programming BlockChain?

BlockChain recommended resources

1. BlockChain Business Overview - TedTalk by Dan Tapscott on BlockChain.
https://www.ted.com/talks/don_tapscott_how_the_blockchain_is_changing_money_and_businessBlockChain

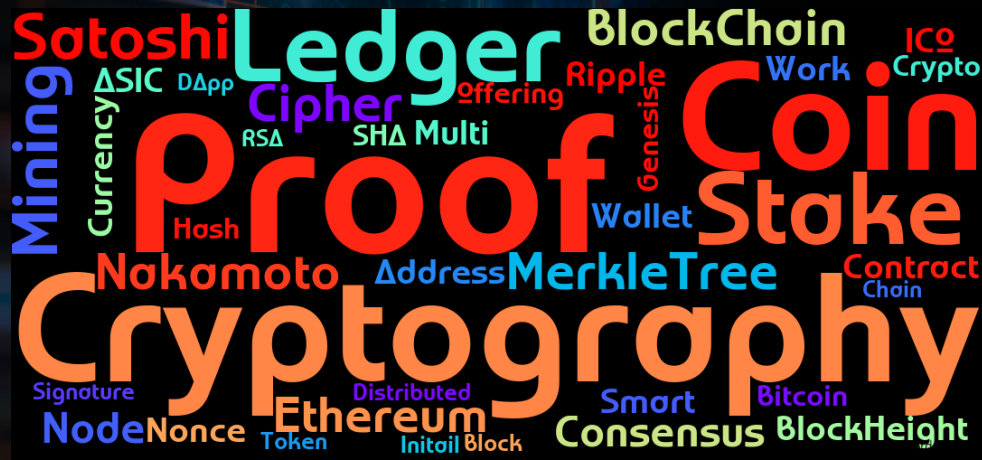2. BlockChain Technology Foundation by Anders Brownworth , one of the most popular foundational understanding
https://www.youtube.com/watch?v=_160oMzblY8

3. This is a very lucid explanation that helps cover the basics from a user perspective and understand the high-level technology for BlockChain.
Build Basic BlockChain from Groundup using Python -
https://hackernoon.com/learn-blockchains-by-building-one-117428612f46

Wordc.net

Bitcoin Block time – ~ 8 to 20 min
https://bitinfocharts.com/comparison/bitcoin-confirmationtime.html#6m
Ethereum Block time - ~15 seconds
https://etherscan.io/chart/blocktime

Concepts to understand on a 🅑 BLOCKCHAIN

- ❑ Distributed
- ❑ Genesis Block
- ❑ Signing + Hashing + Encryption
- ❑ Provenance
- ❑ Consensus (Proof of Work, Proof of Stake)

Different types of BLOCKCHAIN?

❑ Who has the ability to run the node?
❑ Level of importance on anonymity, immutability, efficiency, and transparency

❑ Public
- ❑ anyone can be a user or run a node
- ❑ value anonymity, immutability, and transparency over efficiency
- ❑ Identity is safe
- ❑ Eg: Crypto currencies like Bitcoin

❑ Permissioned
- ❑ who can be a user to run a node is permissioned by an authority
- ❑ value immutability and efficiency over anonymity and transparency
- ❑ Eg: Industry bodies like Banks to settle international transactions
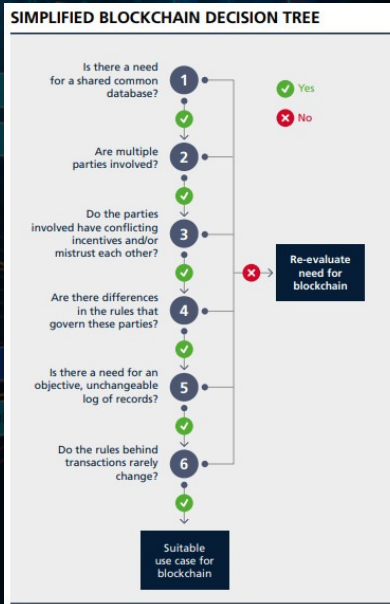
❑ Private
- ❑ operated by one entity
- ❑ value efficiency over anonymity, immutability and transparency
- ❑ Eg: Limited usecases , can be used with in an Organization

BLOCKCHAIN Use cases

- **Australian Securities Exchange**
  - **Near real time settlement of equity transactions**
- **Overstock.com**
  - **Transparency, Efficiency, Accessibility**
- **Smart Properties – Land Records Management**
  - **Bridge gaps between physical and digital**
  - **Zero down time, fault tolerant**
- **Digital Democracy – Voting**
  - **Trustless voting**

https://www.forbes.com/sites/groupthink/2017/11/28/to-blockchain-or-not-to-blockchain-its-a-valid-question/

BLOCKCHAIN Frameworks & Resources

❑ **Bitcoin Core**
❑ **Ethereum**
  ❑ **ICOs**
  ❑ **Smart Contracts**
❑ **Hyperledger**
❑ **and many others... like R3, CORDA etc**

❑ **Bitcoin White Paper**
❑ **Ethereum Platform**
❑ **Hyperledger White Paper**
❑ **Building your own BlockChain using Python**

Journey of Deep Dive on BlockChain

Month	Goal
Month#1(April '18)	Exploring the basics Learn about BlockChain by building one
Month#2(May '18)	The Ethereum BlockChain Deploying your HelloWorld Contract Ethereum & Solidity Basics
Month#3(June '18)	Advanced Smart Contracts Building a Decentralized App
Month#4(July '18)	End to End testing of a BlockChain Application

Thank you

Nagarro, CoderPlex & BlockChain4All community

Questions?