

Web 3.0 And Deep Web

"Evolution Phases Of Internet"



```
root@getintoweb:$> cat whoweare.txt
```

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Agenda:

- Revolution of web
- What is web 3.0?
- Key features of Web 3.0
- Layers of web 3.0
- How web 3.0 works
- Advantages and Risks of Web3.0
- Deep Web

World Wide Web

The most popular internet service

The information on the Internet is organized into sites or pages

Websites are viewed using Internet browsers

Websites are created using a programming language known as hypertext markup language (HTML)

Each website has its own Internet address, which is referred to as a uniform resource locator, or URL

Many URLs start with the letter "www," which stands for "World Wide Web"





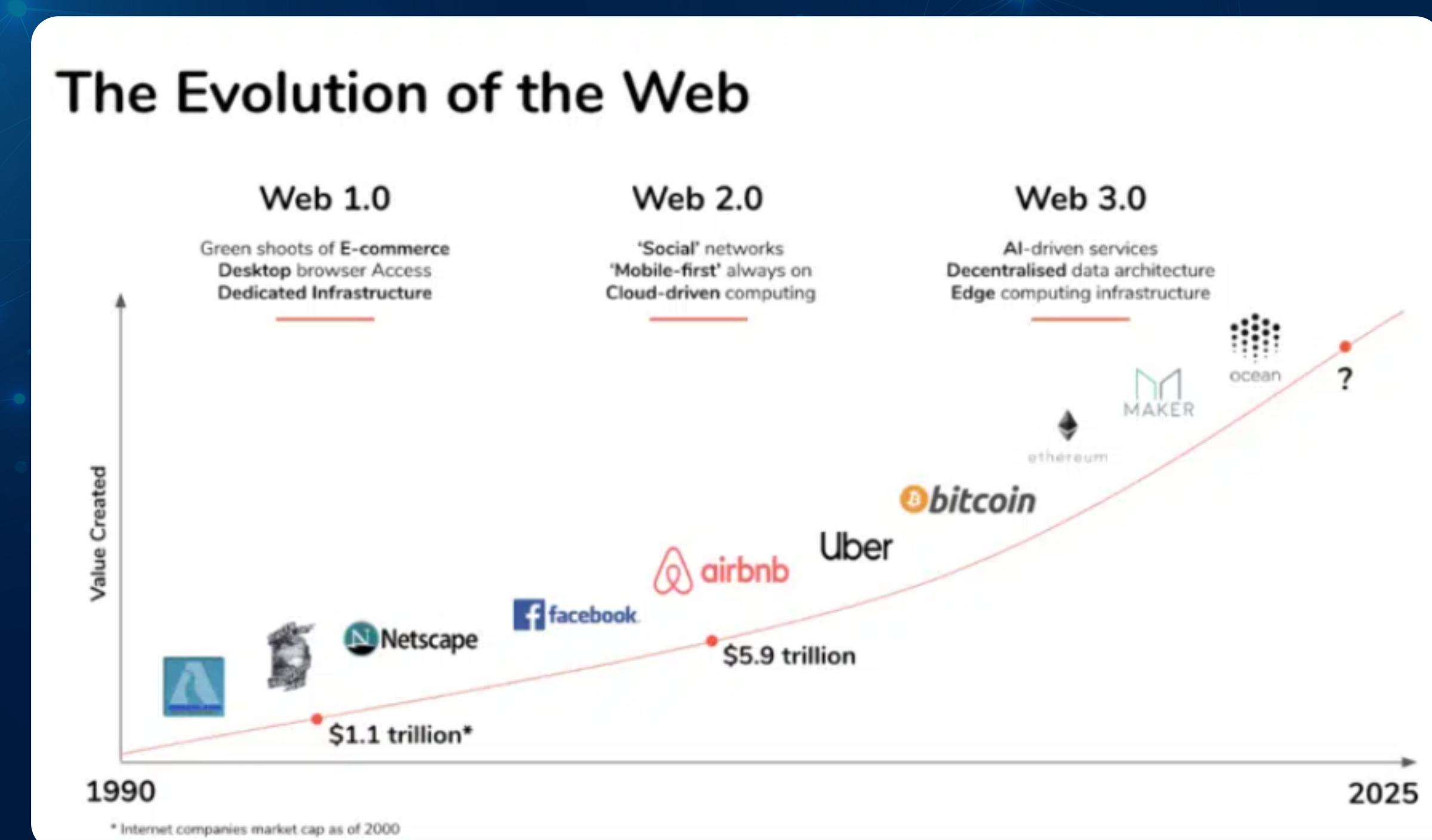
**Well its not evolution
of Human**

Revolution of the Web



Revolution of the Web

2014
Present
Web 3.0
Web 4.0 and
many more
to come....



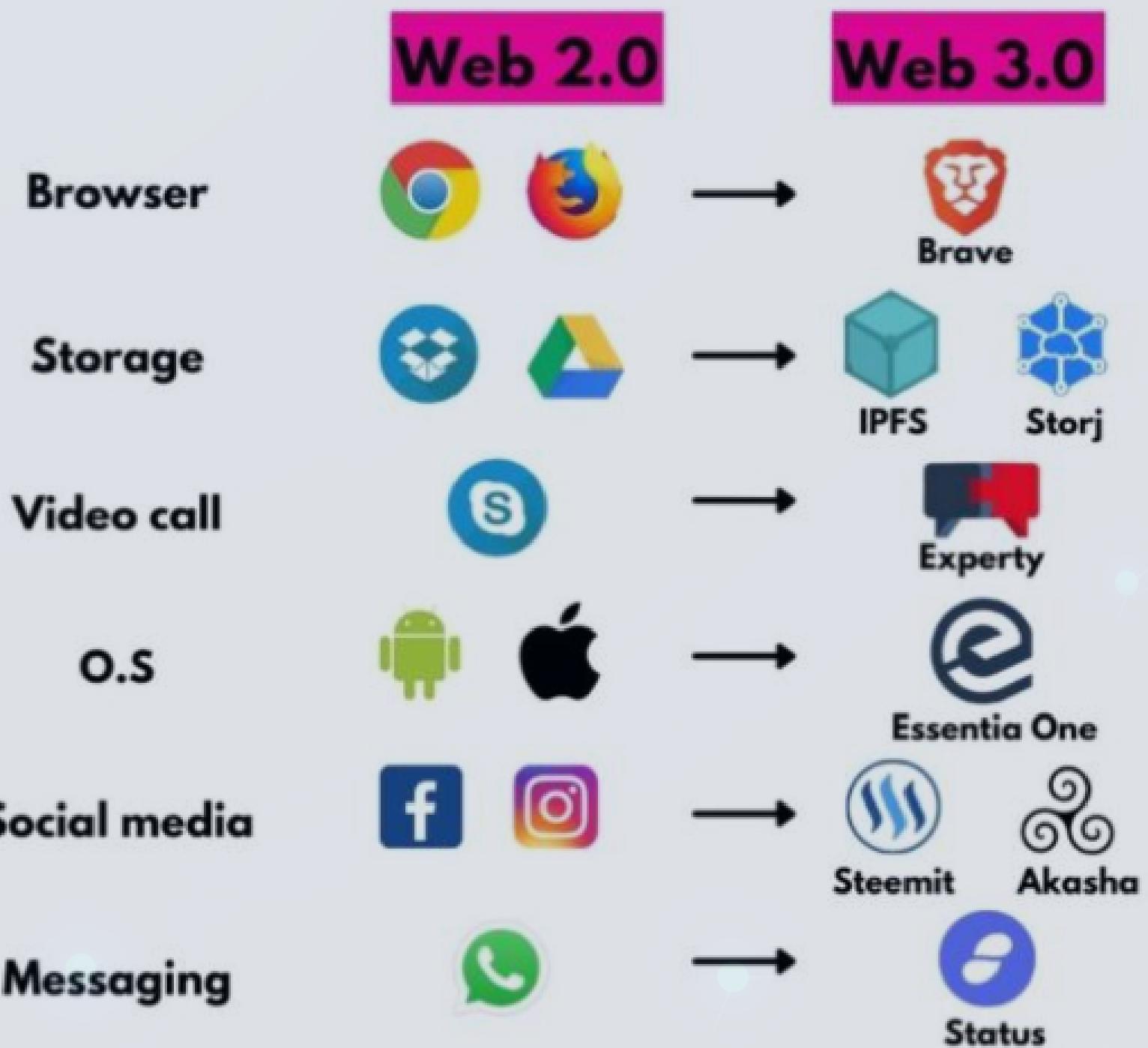
What is Web3.0 ?

- Web 3.0(web3) operates on a decentralized platform and processes information in a smart human-like way.
- It aims to provide a more personalized and efficient user experience through decentralization, user utility, and openness.
- The main issues web 3.0 addresses is the exploitation of user data by large companies, allowing users to control their data and assets and earn compensation for their data and time in specific applications or services.
- Encourages users to actively participate in the development of the web, rather than being passive contributors.

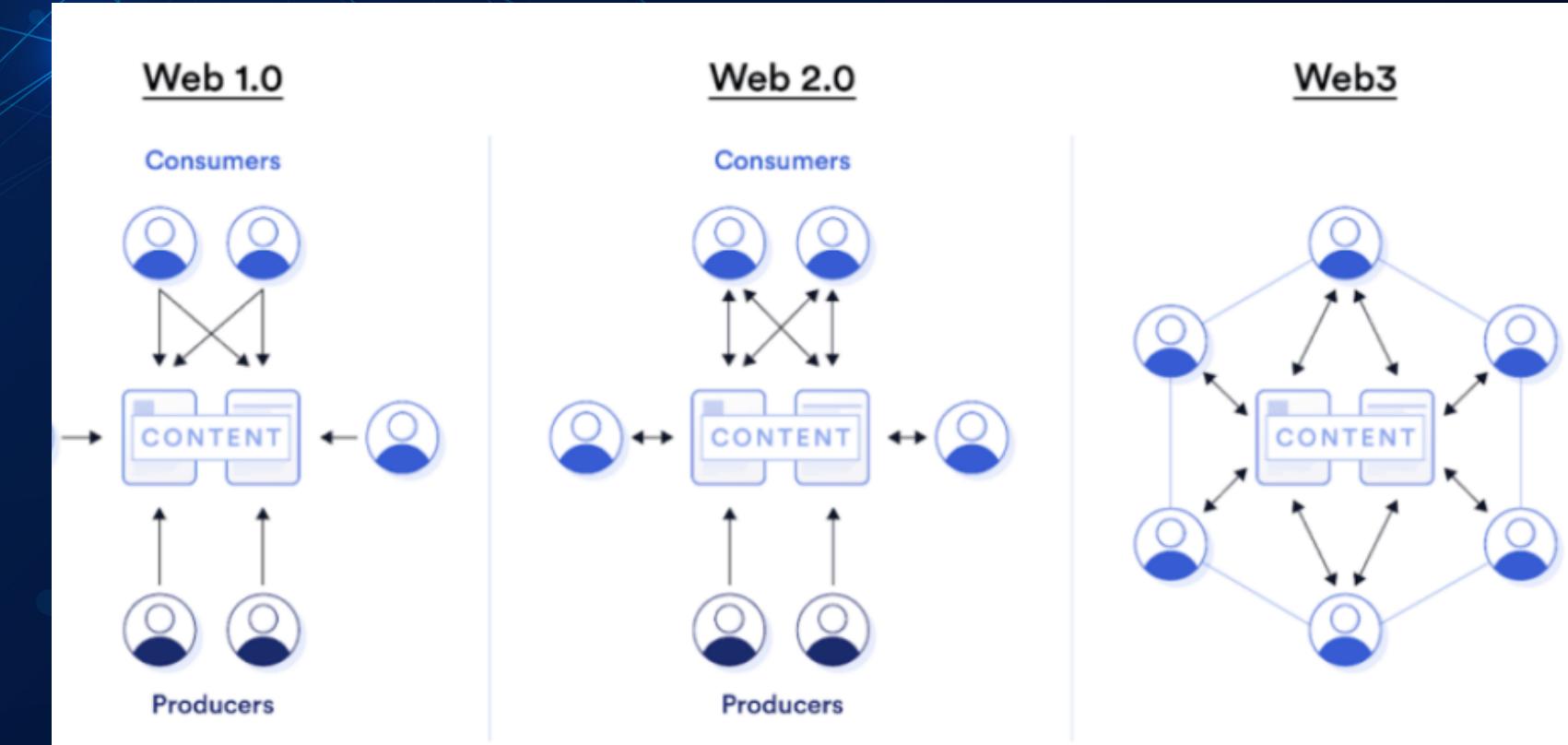
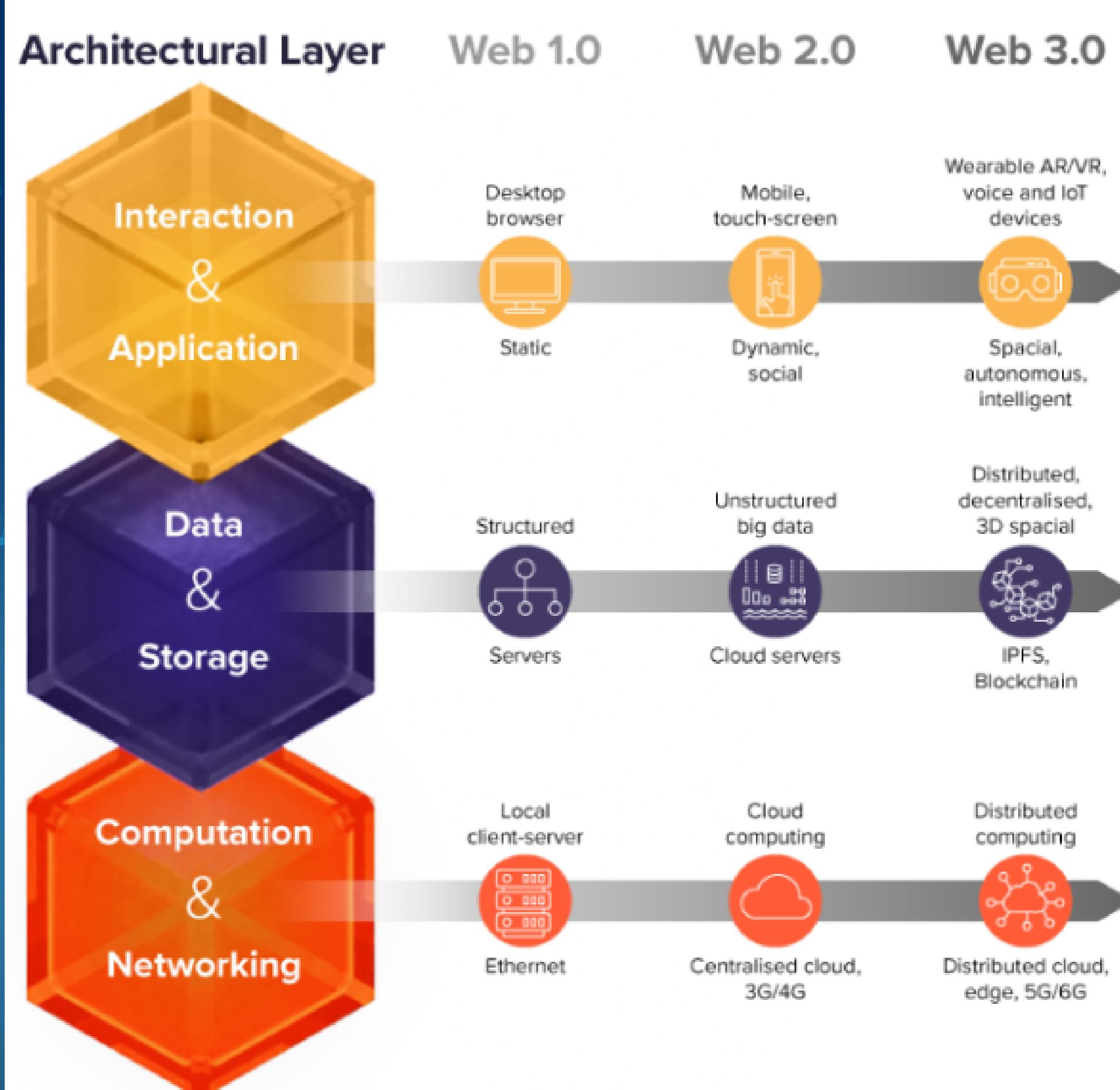


Examples:

WEB 3.0 APPLICATIONS



Differences



Key Features:

- **Decentralization** : The distribution of control and decision-making across a network, reducing reliance on a central authority.
- **Trustless and permissionless**: Users don't need to rely on trust in a central authority. It refers to the open and inclusive nature of the system.
- **Artificial Intelligence** : (AI) involves the development of computer systems that can perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making.
- **Connectivity and Ubiquity** : It refers to the state of being connected and accessible everywhere, anytime, often facilitated by widespread and seamless network connections.
- **Interoperability** :Interoperability refers to the ability of different systems or components to seamlessly work together, exchange information, and use each other's functionalities.

Layers of Web3



Application Layer

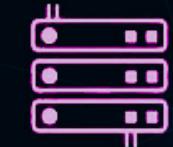
Acts as the User Interface that combines business logic and customer interactions.



dApp Browsers



Decentralized Applications



Application Hosting



Programming Languages

Services and Optional Components

Serves to enable application operations with a view to connecting with other technologies and platforms.



Data Feeds



Multi signatures



Oracles



Off-chain Computing



Wallets



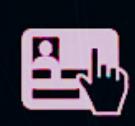
Governance/
DAOs



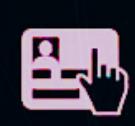
Digital Assets



State Channels



Smart Contracts



Digital IDs

Protocol Layer

Decides the methods of consensus and network participation.



Consensus Algorithms



Side Chains



Permissioned and
Permissionless



EVMs

Network Layer

Acts as a transportation medium and interface for the Peer-to-Peer network and decides how data is packetized, addressed, transmitted, routed and received.



RPLx



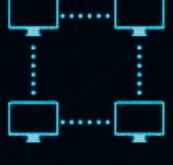
Roll Your Own



Block Delivery
Networks



Trusted Execution
Environment



Peer-to-Peer

Infrastructure Layer

In-house infrastructure or Blockchain as a Service (BaaS) to control the nodes.



Mining



Network



Virtualization



Nodes



Tokens



Storage

Application Layer:

- Serve as entry point for all manner of Web3 activities.

Services and Optional Components:

- Goes into technology layer
- Involves tools to create and run application layer.

Protocol Layer:

- Covers consensus algorithms
- Participation requirements
- Virtual machines

Network Layer:

- Acts as transportation medium and interface for the peer-to-peer network.

Infrastructure Layer:

- Made up of underlying block chain architecture.

Technology Layer In Web 3.0

Web3 Tech stack

L4

(9) protocol-extensible user-interface cradle
("Browser")

L3

(8) Protocol-extensible developer APIs & languages

L2

(7) Second layer protocols

(7.1) Stable channels (7.2) Plasma protocols (7.3) Encrypted storage (7.4) Storage incentivisation (7.5) Heavy computation (7.6) Distributed secret management (7.7) Oracles (7.x) ...

L1

(5) Zero/low-trust interaction protocols

(3) Data distribution protocols

(4) Zero/low-trust interaction platforms (Shared security)

(6) Transient data pub/sub messaging

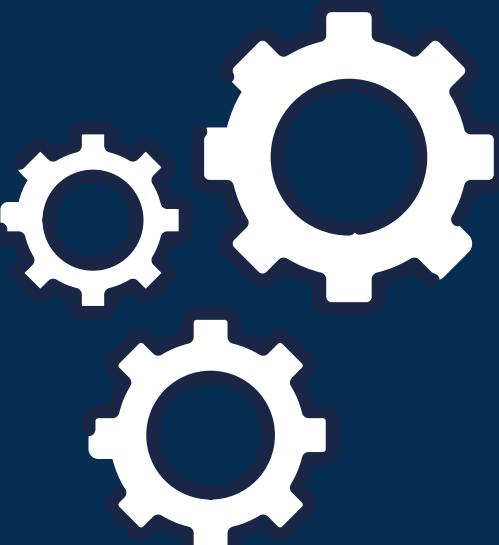
L0

(1) Peer to peer (p2p) internet overlay protocols

(2) Platform-neutral computation description language

How web3.0 works?

- Core Technology: Blockchain serves as the foundational technology.
- Application: Web3 encompasses various aspects including NFTs, cryptocurrencies, and decentralized applications (dApps).
- Platform Dominance: Ethereum networks host the majority of Web3 projects.
- Storage Shift: Web3 advocates for decentralized storage over traditional server farms.
- Transparency: Data is recorded on the blockchain, ensuring transparency in data flow.
- Cryptographic Security : Prevents misuse by maintaining transparent data records
- Smart Contracts: Self executing contract that automatically execute actions when predefined conditions are met.



Advantages of Web3.0

Data Ownership

End-user have full ownership of data usage.

Global Accessibility

Web3 technologies are accessible to anyone with an internet connection

Security

Utilizes cryptographic technique like blockchain for data integrity and protection from unauthorized access

Personalized Web Surfing Experience

Analyzes internet usage and customize themselves based on device, location

Decentralization

Eliminates single point of control, enhancing resilience and reducing reliance on intermediaries

Transparency

Enables users to track their data look over the source code of platform they decide to utilize. Avoids rely on a middleman for data access.

Uninterruptible services

Distributed architecture reduces vulnerability to system failures and cyber attacks, ensure continuity of services

Possible Risks of Web3.0

- Non - compliance with regulatory precedents
- Unauthorized Information Access
- Standardization of Trust and Proof
- Malicious Script Injections
- Social Engineering
- Data Availability
- Data Confidentiality



Deep Web

The Hidden Part of Web



Surface Web

- Webpages with static or persistent URLs that can be detected by a search engine crawler.
- Once detected, the URL is added to that search engine's database and can become a result in a query or search of that search engine.



Images

Videos

Male

In a week

In school

WikiHow

Black man

Like Korean

Kid

About 324,000,000 results (0.23 seconds)

10 healthy habits that make you handsome

1. Care about skin care. Too often, this advice is sloughed off like dead epidermal cells.
...
2. Butt out. As in, stop smoking. ...
3. Eat right. A healthy diet equals a more glowing complexion, shinier hair and a fitter you. ...
4. Sleep. ...
5. Hydrate. ...
6. Slenderize. ...
7. Be pro-antioxidant. ...
8. Do cardio.

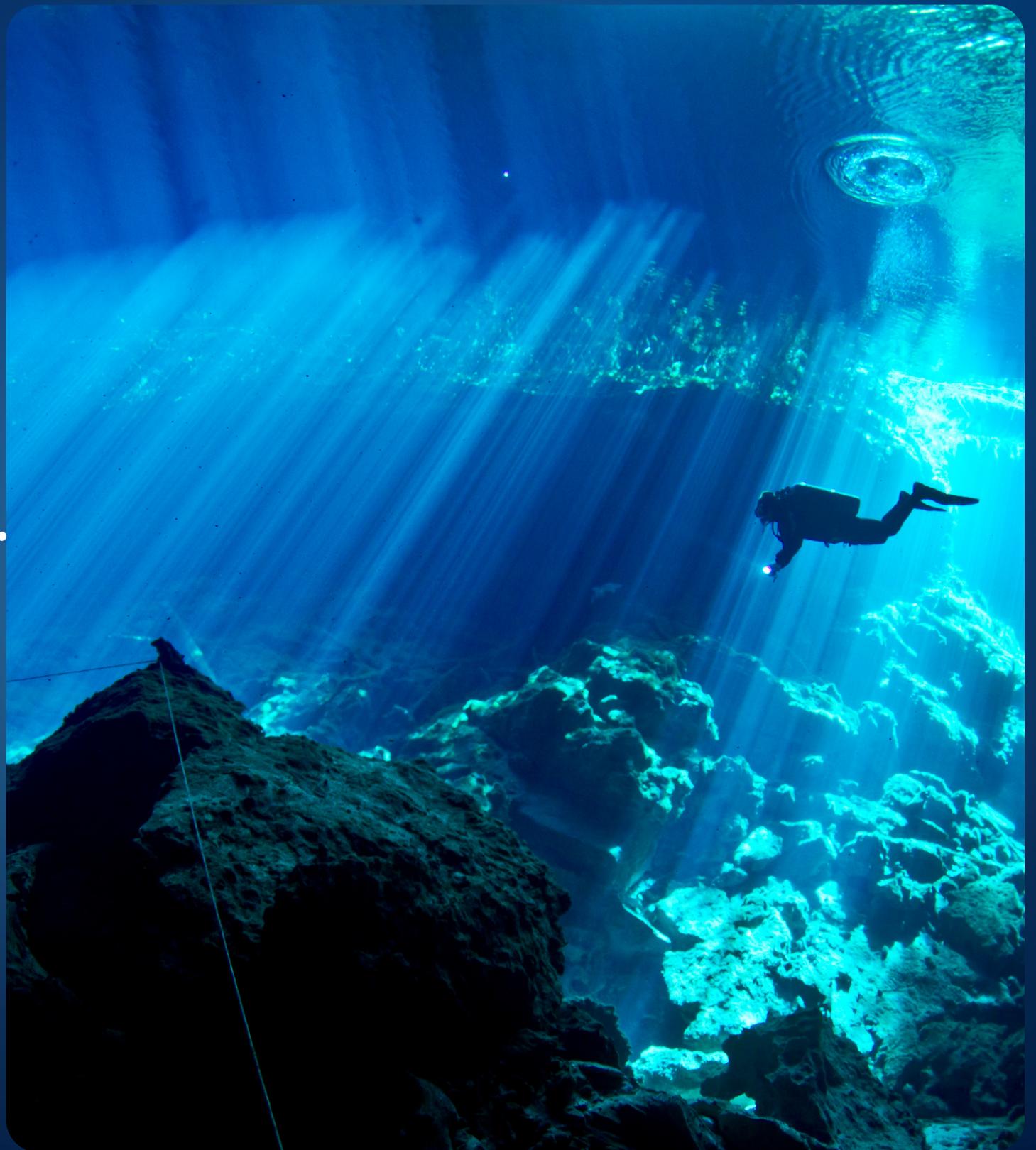
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Deep Web

- Hidden part of web.
- Inaccessible to conventional search engines, and consequently, to most users.
- Information is contained in dynamic webpages that are generated upon request to a database,
- It has no persistent or static URL.



Why Search engine can not find the content of Deep web?

Private Web

Limited Access Content

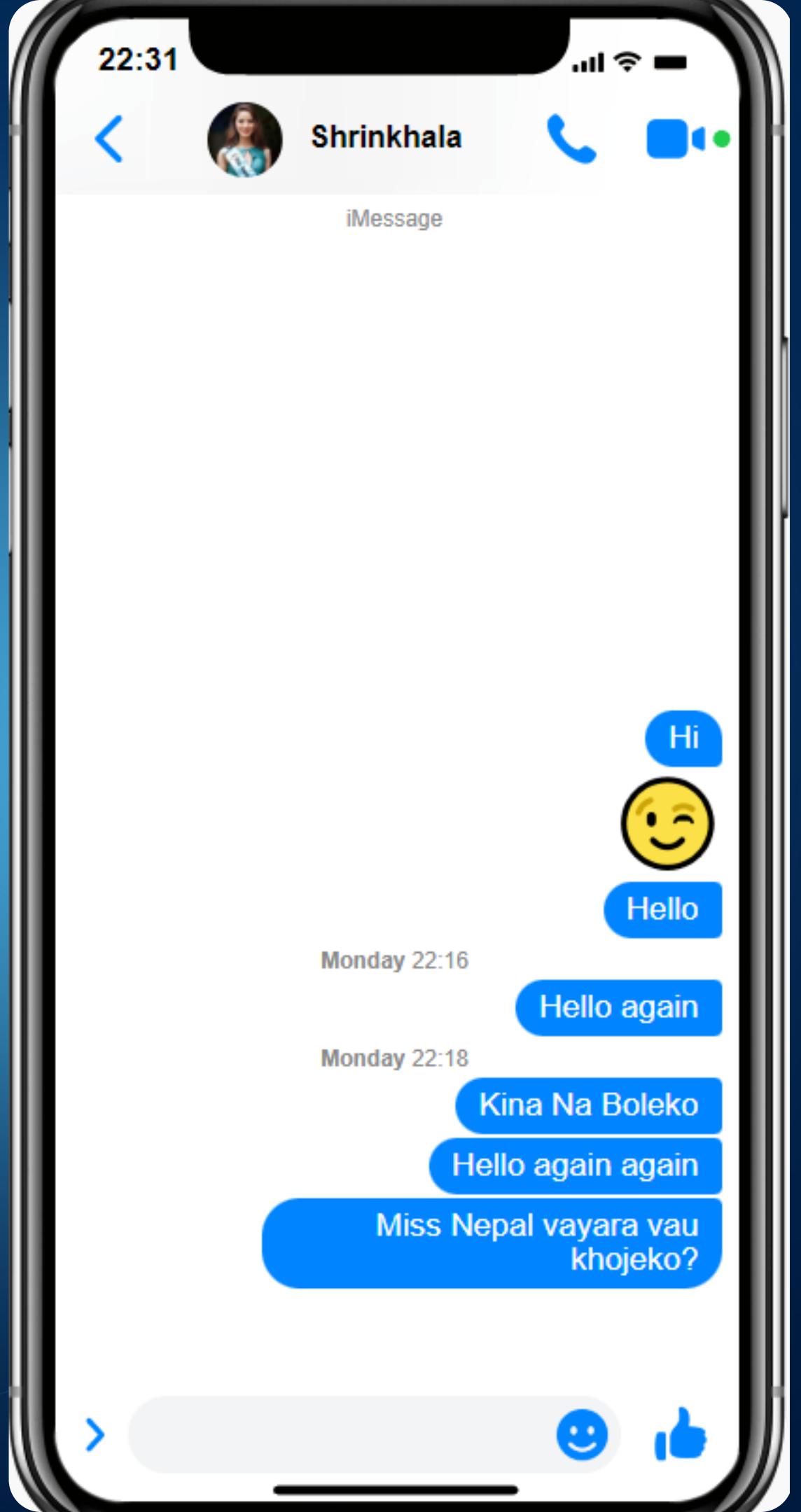
Dynamic Content

Unlinked Content

Non-HTML Content

Examples of Deep web Contents

- Emails
- Subscription content (like Netflix)
- online banking transactions
- Private Databases
- Non-public social media pages
- Personal Chats



SURFACE WEB

DEEP WEB

DARK WEB

Facebook

Google

YouTube

Instagram

Medical Records

Legal Documents

Private Forums

Research Papers

Non Indexed Content

Private Communication Forums

TOR Illegal Trade

Illegal Activities

What Number says

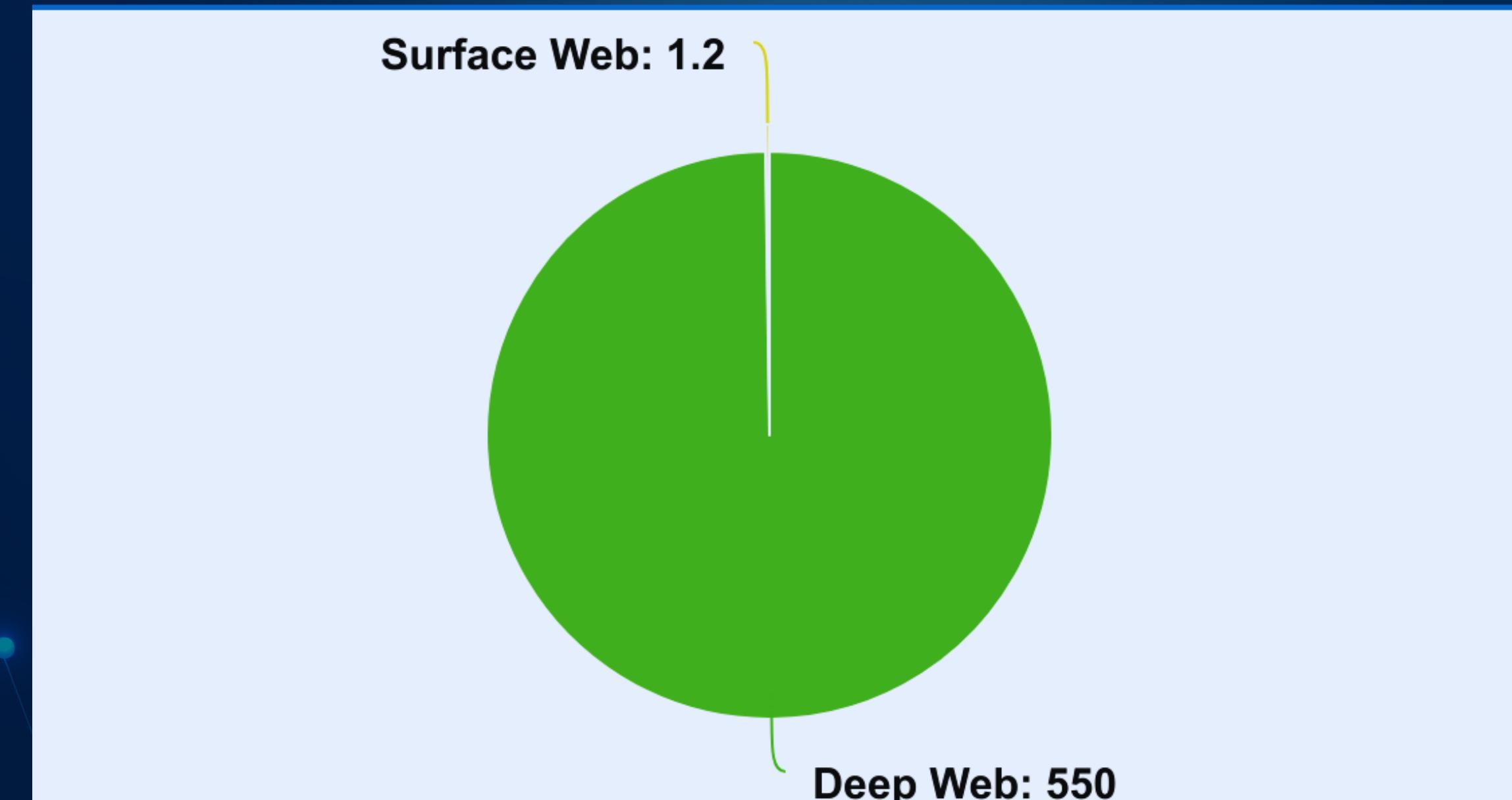
Usage of Surface web
vs Deep Web

Surface Web
4%

Deep Web
96%

What Number says

Documents In Billion



Deep Web

Surface Web

meta-chart.r

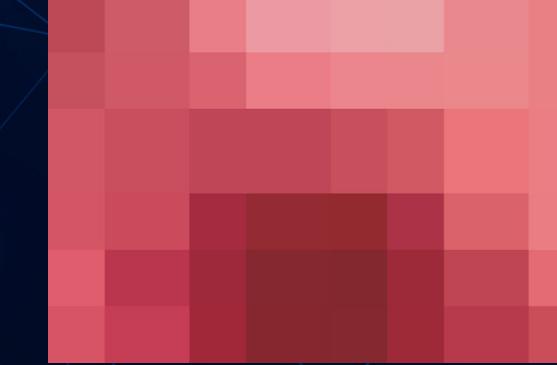
Dark Web

- Subset of Deep web.
- Contents 0.1% of total internet.
- Involves **criminal** activities.



Activites in Dark Web

- Drug and Weapon trading
- Pornography
- Illegal websites.
- Online shops for fake documents
- Crimes
- Hacking services and stolen data
- Financial fraud service



pornography
cryptocurrency exchange
counterfeit good
dark web crime
service
data
drug
weapon

distressing trade of child exploitation material

Cyber Security Hub

DDoS attack-for-hire services thriving on Dark Web and cyber criminal forums | Cyber Security Hub



Threat actors continue to show interest in purchasing DDoS attack-for-hire platforms with the criminal market showing little sign of...
Read more



Personal information of 81.5 crore Indians on dark web | Mint



WION

Aadhaar Data Leaked on dark web | Mint

Indians on dark web | Mint

The leaked information includes Aadhaar numbers, addresses, Aadhaar, and passport details of 81.5 crore Indians.

Oct 31, 2023

Jul 28, 2023

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Philippines Health Insurer's Data Hacked, Posted on Dark Web

Hackers have stolen the personal data of potentially millions of people from the Philippines's national health insurer, which has urged...

Oct 9, 2023

Drug trade through dark web big threat' ... Kochi: Rob Leventhal, division chief of State's bureau of international

Times of India

Featured Listing

Offer



Dipesh Tripathi \$499.9
(Big Black Guy)

Stock: 1



Fresh Kidney \$69.99
(Buy 2 get 1 free)

Stock: 30

Shop now at [NightMare.com](#)

Dark Web NightMare

When you're browsing the Dark Web and see yourself on Sale with a 70% Discount.....



Boys After purchasing Guns from Gun hub





Any Questions?

Thank You