



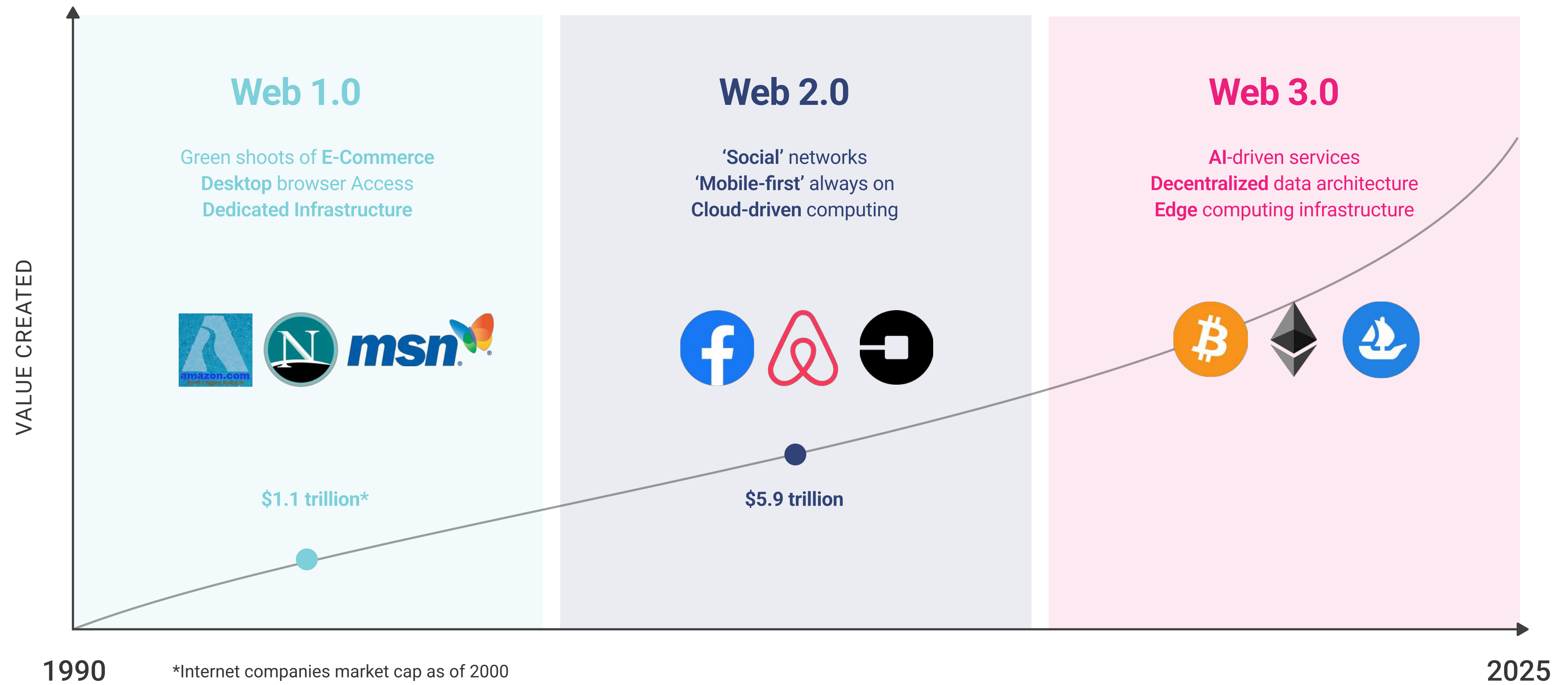
Web 3.0

The Future of the Internet

EBRIC Educator Program (EEP)
by EBRIC (Malaysia)

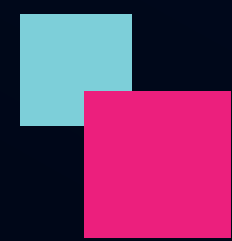


The Evolution of Web

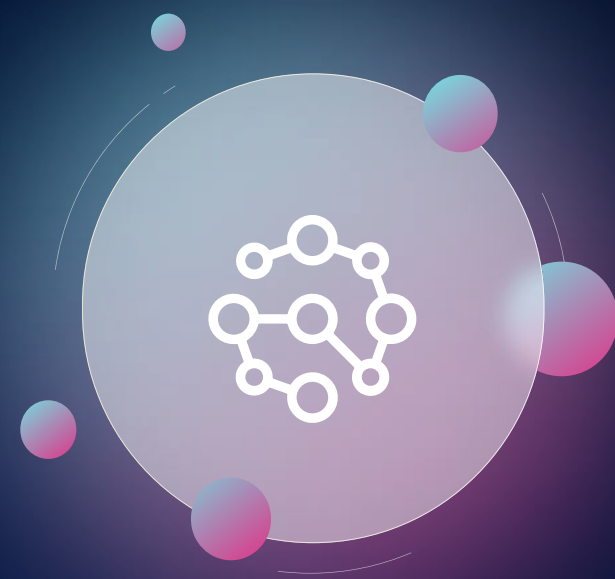


Why is **Web 3** Necessary?

Web3 solves the limitations of Web2, where tech giants control user data and monetize user-generated content without user's permission.

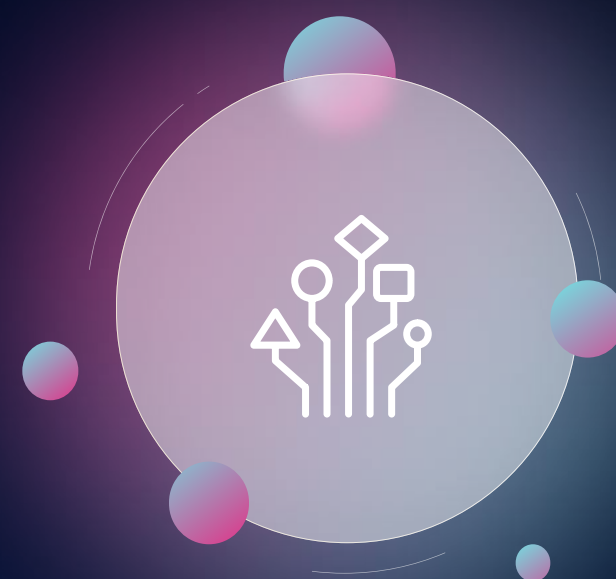


4 Cores Principal of Web3



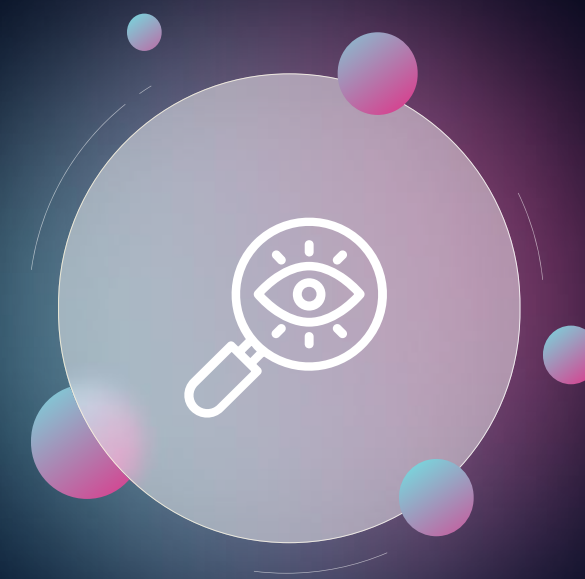
Decentralization

Users own their data with decentralized technologies, no single point of control



Interoperability

Enables different platforms' interoperability for global trustless interactions



Transparency

Every transaction and piece of data on Web 3 is publicly viewable and auditable



User Control

Enables user control over data and assets, ensuring ownership and privacy

Web2 VS Web3 : What's the Difference?

Web 2.0 relies on centralized systems controlled by powerful organizations, leading to :

- Censorship
- Data breaches
- A lack of privacy for users

Web 3.0 is based on decentralized systems that are more democratic and secure :

- Users own their data
- Transactions are peer-to-peer
- Intermediaries are eliminated

Web2 VS Web3

Centralized Control

User data, content and overall user experience are owned & operated by centralized entities

Limited User Ownership

Users must trust centralized platforms to protect and manage their personal information

Lack of Interoperability

Platforms are isolated silos, hindering different applications to communicate and share data

Vulnerability to Censorship

Susceptible to censorship, as decisions are made by a single authority

Control

User Ownership

Interoperability

Censorship

Decentralized Control

Control distributed across a network of nodes, enabling collective decision - making

User Ownership & Control

Users can choose how their data is shared, stored, and utilized as ownership is granted

Great Composability

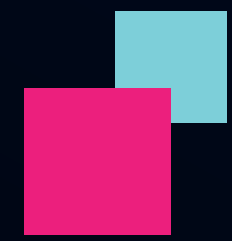
Apps and platforms can easily interact, share data and build upon each others' functionalities

Lower Risk of Censorship

The reliance on a single authority to control access and content is removed

Example of Web1.0

Web1.0 - Centralized, one-way

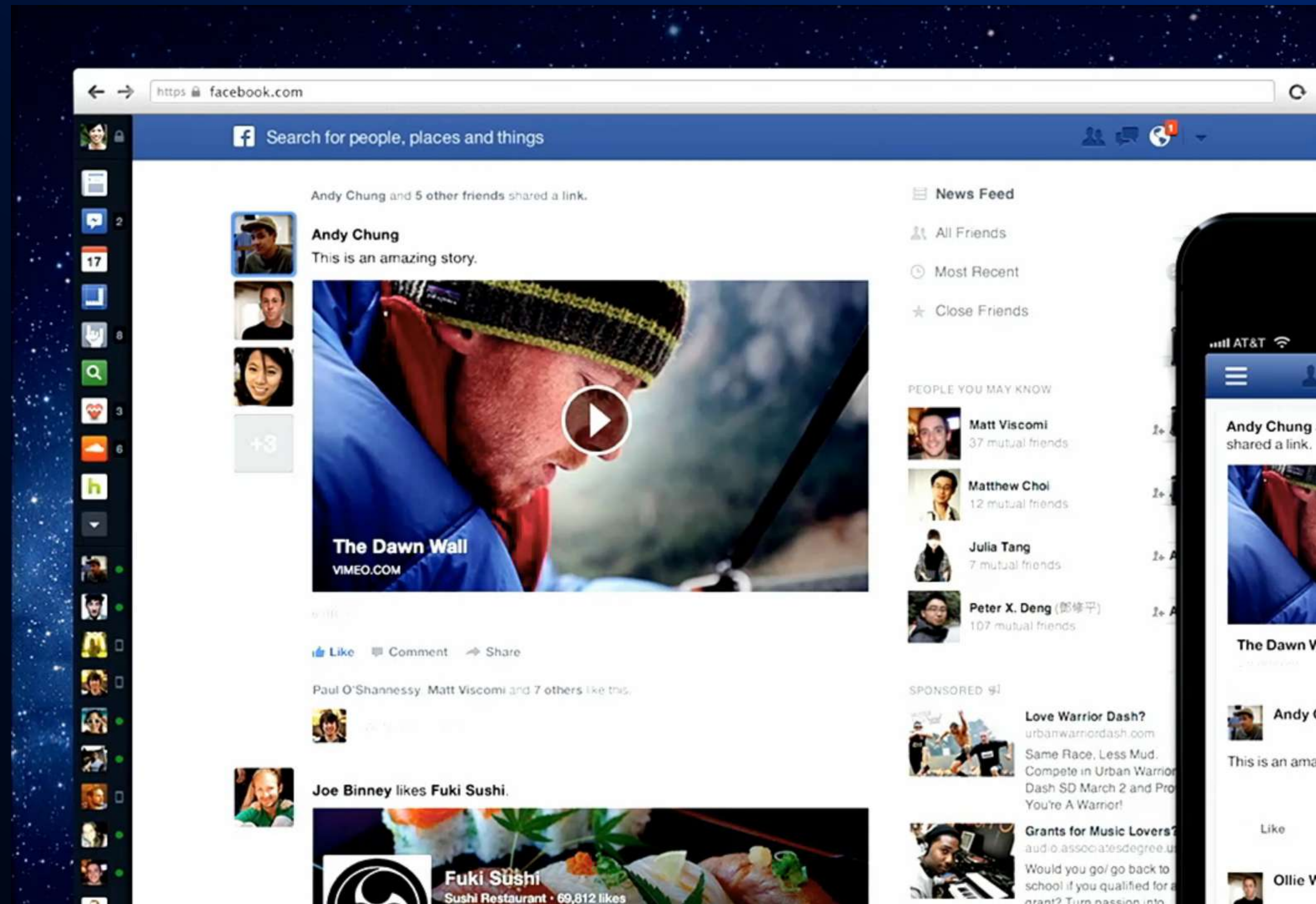
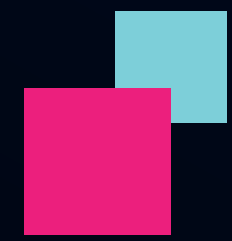


The screenshot shows the Craigslist website for the San Francisco Bay Area. The layout is organized into several sections:

- Navigation:** "SF bay area" with sub-region links (sfc, sby, eby, pen, nby, scz).
- Left Sidebar:** Includes "post to classifieds", "my account", a search bar, an "event calendar" (a grid showing dates from 19 to 15), and various help links like "help, faq, abuse, legal", "avoid scams & fraud", "personal safety tips", "terms of use", "privacy policy", and "system status".
- Main Content Area:** Divided into four primary categories:
 - community:** Lists items like activities, artists, childcare, classes, events, general, groups, local news, lost+found, missed, connections, musicians, pets, politics, rants & raves, rideshare, and volunteers.
 - personals:** Lists "strictly platonic", "women seek women", "women seeking men", "men seeking women", "men seeking men", "misc romance", and "casual encounters".
 - discussion forums:** Lists various topics such as apple, arts, atheist, autos, beauty, help, history, housing, jobs, jokes, photo, p.o.c., politics, psych, and queer.
 - housing:** Lists "apts / housing", "housing swap", "housing wanted", "office / commercial", "parking / storage", "real estate for sale", "rooms / shared", "rooms wanted", "sublets / temporary", and "vacation rentals".
 - for sale:** Lists "antiques", "appliances", "arts+crafts", "atv/utv/sno", "auto parts", "baby+kid", "barter", "beauty+hlth", "bikes", "boats", "books", "business", "cars+trucks", "free", "furniture", "garage sale", "general", "heavy equip", "household", "jewelry", "materials", "motorcycles", "music instr", "photo+video", "rvs+camp", "sporting", and "tickets".
 - jobs:** Lists various job categories like "accounting+finance", "admin / office", "arch / engineering", "art / media / design", "biotech / science", "business / mgmt", "customer service", "education", "food / bev / hosp", "general labor", "government", "human resources", "internet engineers", "legal / paralegal", "manufacturing", "marketing / pr / ad", "medical / health", "nonprofit sector", "real estate", "retail / wholesale", "sales / biz dev", "salon / spa / fitness", "security", "skilled trade / craft", "software / qa / dba", and "systems / network".

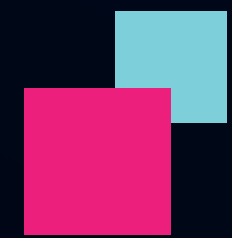
Example of Web2.0

Web2.0 - Centralized, two-way



Example of Web3.0

Web3.0 - Decentralized, two-way



Web1 = The Internet of Information

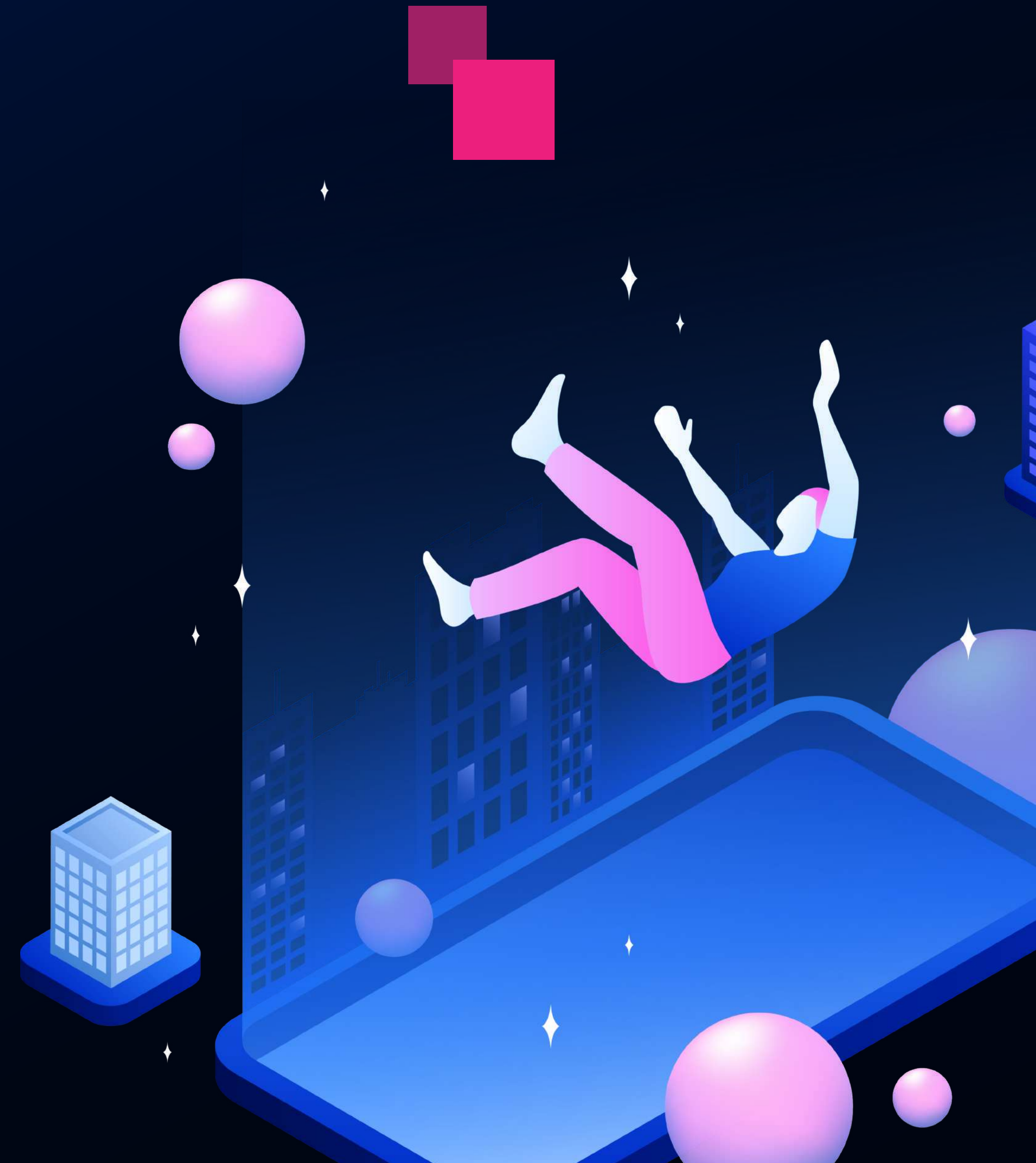
The HTML CSS websites you cannot interact with

Web2 = The Internet of Interactions

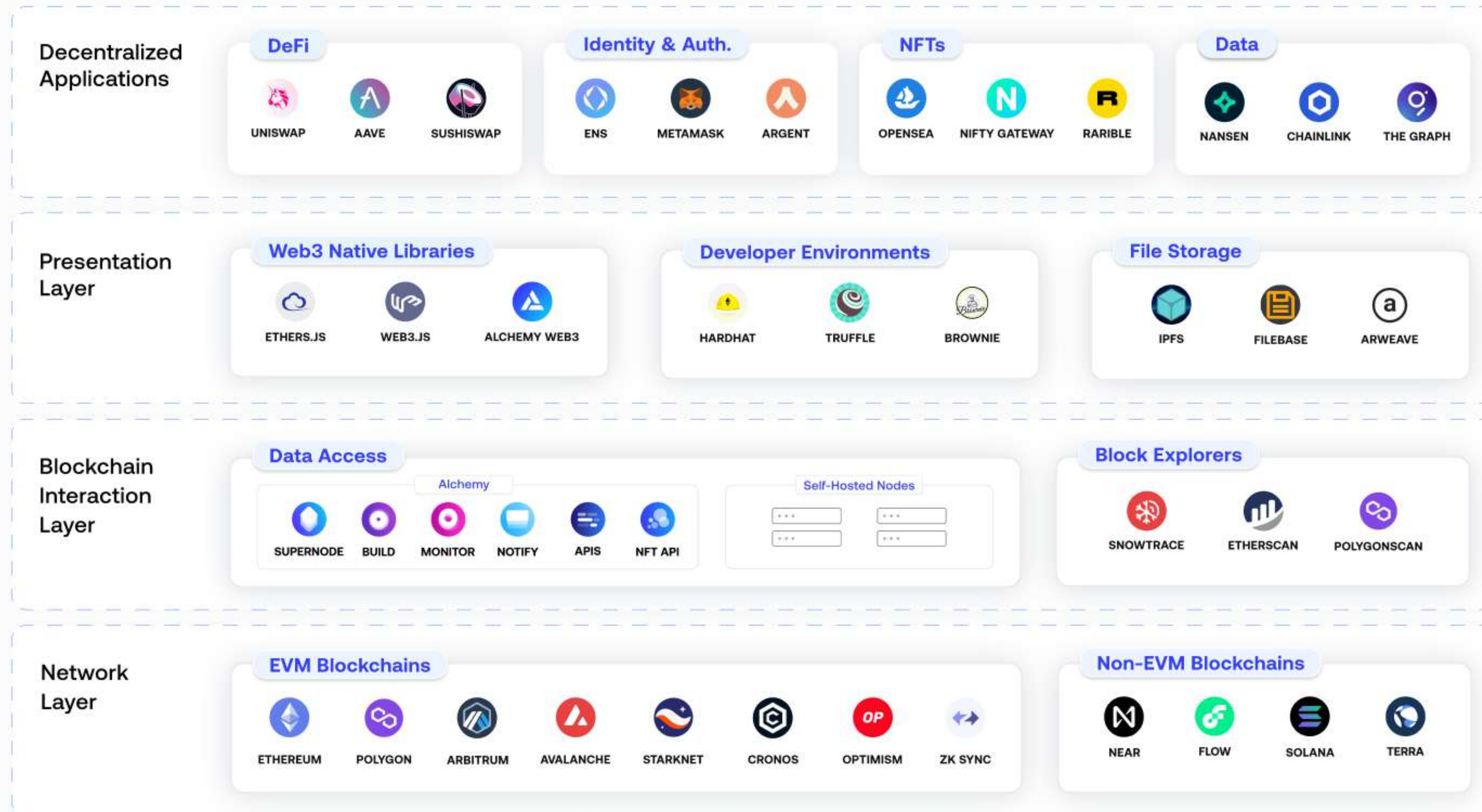
Modern platforms like Twitter & Instagram that connect you seamlessly with others

Web3 = The New Internet of Value

The internet where centralization of information is eliminated



Overview of Web3 Tech Stack

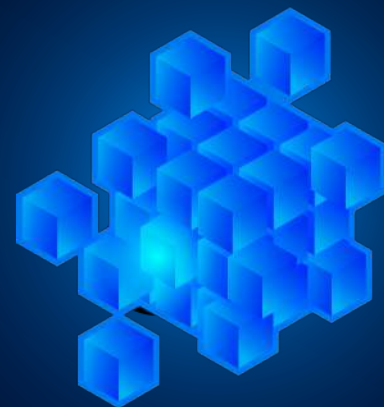


Decentralized Finance (DeFi) Ecosystem



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Primary Features of Web3



Blockchain

- Enables decentralization and ensures cryptographic security for user data
- Web3 leverages blockchain for transparency, facilitating audits and enhancing security within the ecosystem



Semantic Web

- Makes internet data machine-readable
- Allows for easier interpretation by machines
- Promotes cross-chain data sharing
- Facilitates the distribution of content, user data, and related information across various apps and enterprises



Connectivity

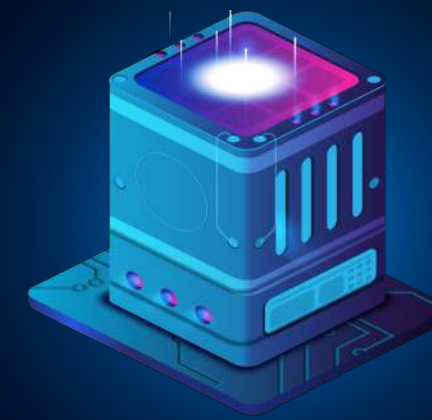
- Improves data connectivity with semantic metadata technology
- Enables simultaneous access to multiple data sources
- Expands internet accessibility through IoT sensor-based devices, reaching beyond smartphones and computers

Primary Features of Web3



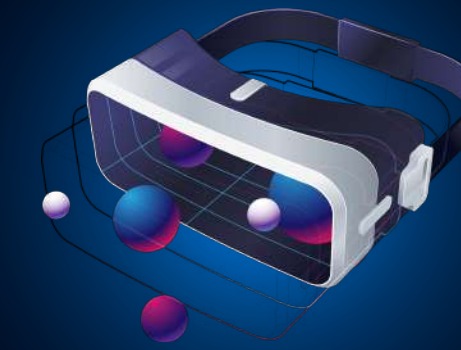
Edge Computing

- Brings computational power and data storage closer to the source of data generation
- Reduces latency and reliance on centralized data centers



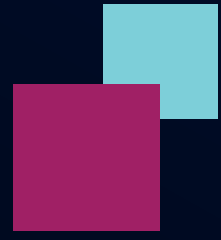
Decentralized Data Network

- Emphasizes decentralized networks by allowing users to trade/exchange data without intermediaries
- Preserves ownership and privacy



3D Graphics & Spatial Metaverse

- Bridges the gap between physical and virtual worlds, hence the name "spatial web"
- Harnesses the power of 3D graphics to build immersive environments in healthcare, ecommerce, and real estate



Web3 Use cases & Applications

Metaverse & Metaspaces

- 3D immersive spaces
- Realistic marketplaces
- 3D avatars

Next-gen dApps

- DeFi apps
- Cross-chain dApps
- Metaverse applications

Decentralized Finance

- Multichain defi solutions
- Highly efficient defi apps
- Scalable defi platforms

Advanced Gaming

- Play-to-earn games (P2E)
- Play-to-own games (P2O)
- Crypto-based games

Privacy & Data Management

- Cryptography
- Oracles
- Zero-knowledge Proof

Social Media

- Social media dApps
- Wallet-based access
- Private key

Remote Workplaces

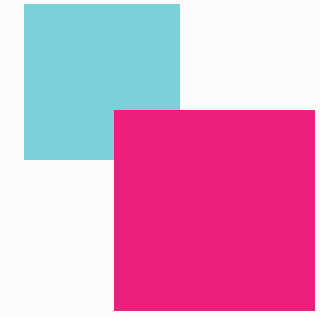
- Avatars
- Virtual Meetings
- 3D-enabled workspaces

Virtual Real Estate

- NFT-backed properties
- Digital proof of ownership
- 3D real estate marketplaces

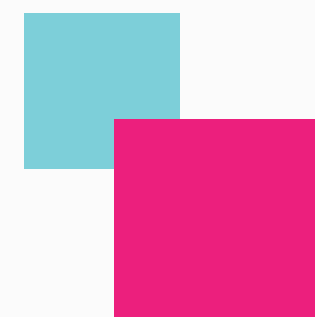
Advanced NFT Use Cased

- Immutable NFT records
- Funding to DAO
- Tokenization



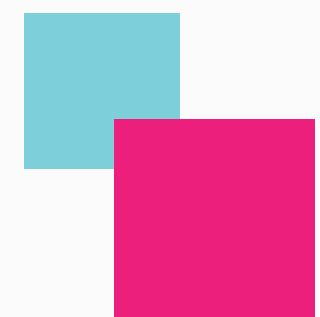
Developed by Vietnam-based game studio Sky Mavis, **Axie Infinity** is a blockchain-based play-to-earn (P2E) game built on the Ronin network, an Ethereum sidechain.





Polkadot is an open-source, flagship project by Web3 Foundation, a Swiss Foundation founded to facilitate a fully functional and user-friendly decentralized web.





Uniswap is an open source, decentralized cryptocurrency exchange hosted on the Ethereum platform that utilizes smart contracts to execute trades.



Challenges of Web3.0

Technical Complexity

Web 3 requires advanced knowledge of blockchain technology, cryptography, and smart contracts, which can create a high barrier to entry for developers and users alike.

Mass Adoption

Web 3 is still in its early stages, and widespread adoption may take time and effort, especially for traditional business and institutions.

Scalability

Main issue : The limited number of transactions that can be processed per second.
Potential for delays and high transaction fees may hinder mainstream adoption as payment system.

The Future of Web3



Potential Applications

- Decentralized gaming
- Virtual reality
- Supply chain management
- Voting systems



Impact on the Society

Web 3 can revolutionize the way we interact, transact and coordinate as individuals and organizations, unlocking new levels of freedom, creativity, and social impact.



Conclusion

Web 3 is not just a new technology, but a new paradigm of trust, ownership, and cooperation.



Thank You

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