WEB2 VS WEB3 ENGINEERING

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SPEAKER PROFILE

- Product Engineer @ Zero One Group
- 4+ years of BE experience
- Speaker @ Python Conference APAC 2024
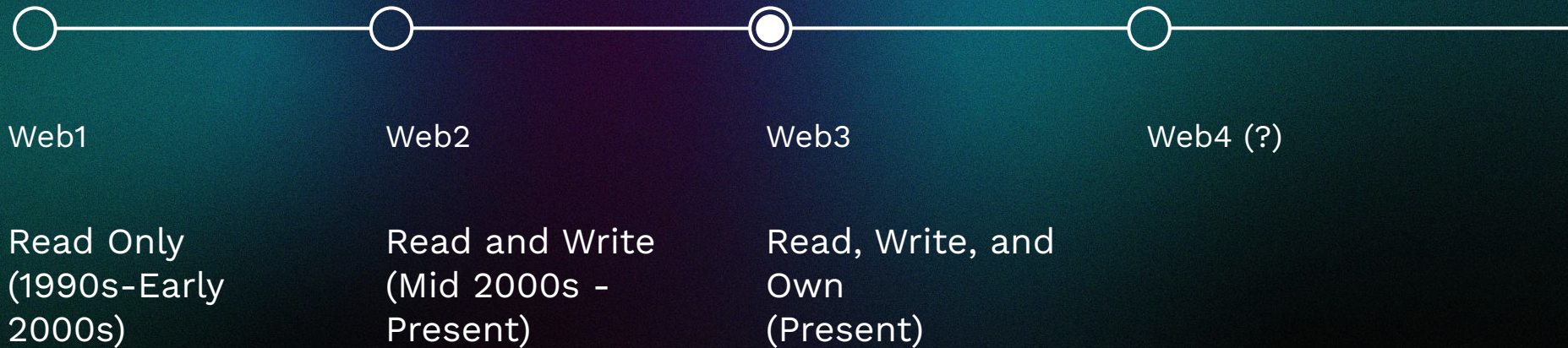- Pragmatist

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INTRODUCTION

HISTORY OF THE WEB

Web1

Read Only
(1990s-Early
2000s)

Web2

Read and Write
(Mid 2000s -
Present)

Web3

Read, Write, and
Own
(Present)

Web4 (?)

Berkshire Hathaway Website   X   Hyperliquid (DApp)   ?

WEB1, WEB2 & WEB3 WEBSITES

WEB2 VS WEB3 ENGINEERING

WEB2 VS WEB3 ENGINEERING

Source: TheSequence

CHARACTERISTICS

	Web2	Web3
Model	Centralized	Decentralized
Transaction Speed	Fast; almost instant	Slower
Data Ownership	Company-owned	Individually-owned
Transparency	Not transparent	Highly-transparent
Medium of Exchange	Fiat	Cryptocurrencies
Ease of Use	Easy	More Complex
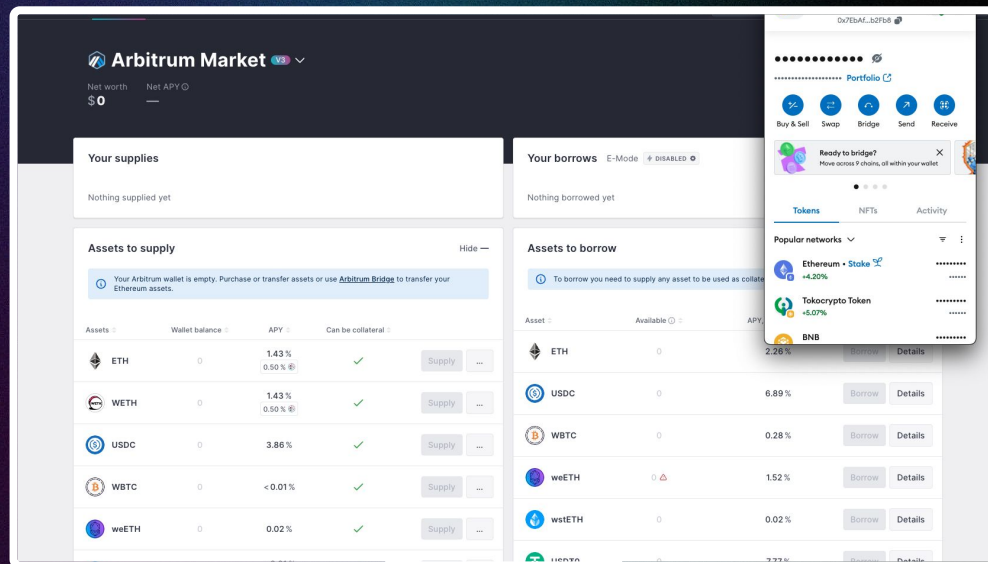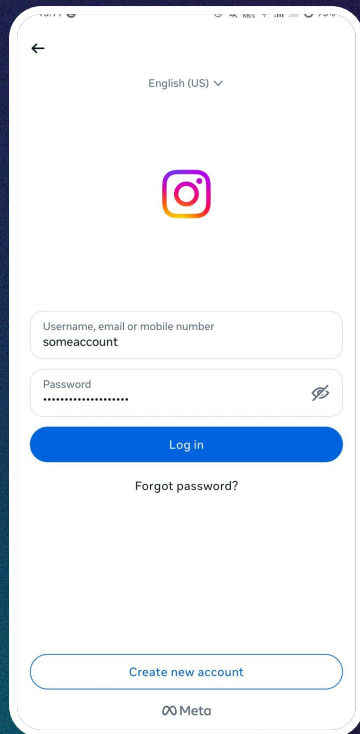
CHARACTERISTICS

WEB2 CONCERNS - CAP THEOREM
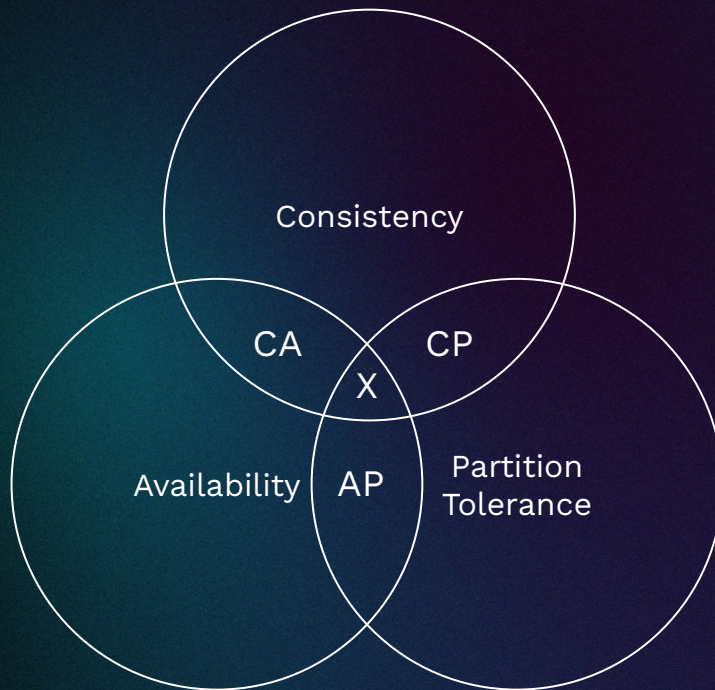
WEB3 CONCERNS – THE BLOCKCHAIN TRILEMMA

WEB3 CONCERNS - THE BLOCKCHAIN TRILEMMA

Decentralization

Scalability

Security
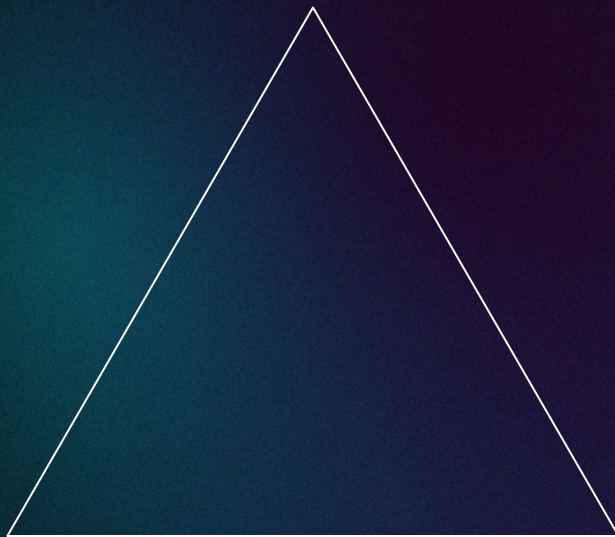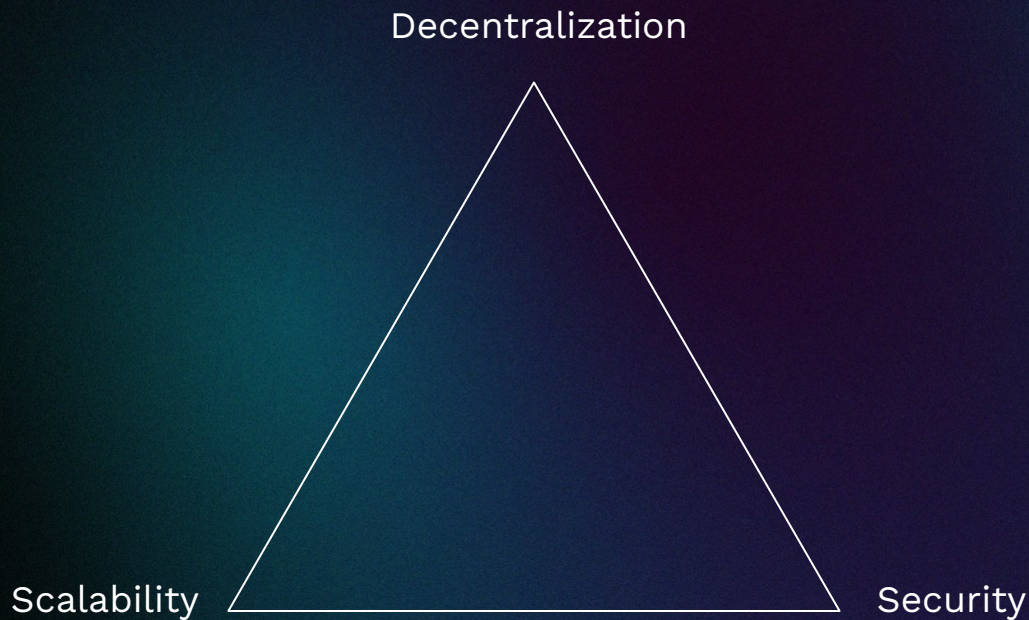
TECHNOLOGIES

	Web2	Web3
APIs	REST/GraphQL	Smart Contract ABIs
Storage	MySQL, PostgreSQL, AWS S3	IPFS, Filecoin
Authorization	OAuth 2.0	Wallet Signatures
Infrastructure	Kubernetes	Cosmos SDK
Payment Gateways	Stripe, PayPal	Wormhole, Axelar
Programming Languages	Node.js, Python, Go, Java	Solidity (EVM), Rust (Solana), Move (Sui)

WEB3 INNOVATIONS

- Programmable money (tokens, stablecoins)
- Decentralized Autonomous Organizations (DAOs)
- Decentralized Finance (DeFi)
- Non-Fungible Tokens (NFTs)
- Decentralized Identity Management
- Decentralized Gaming / Metaverse
- Decentralized Social Media
- Decentralized Science (DeSci)
- Decentralized Physical Infrastructure Network (DePIN)
- Etc.

JADI, MANA YANG LEBIH CUAN?

Average Salaries

Backend vs Blockchain Engineers Average Monthly Salaries
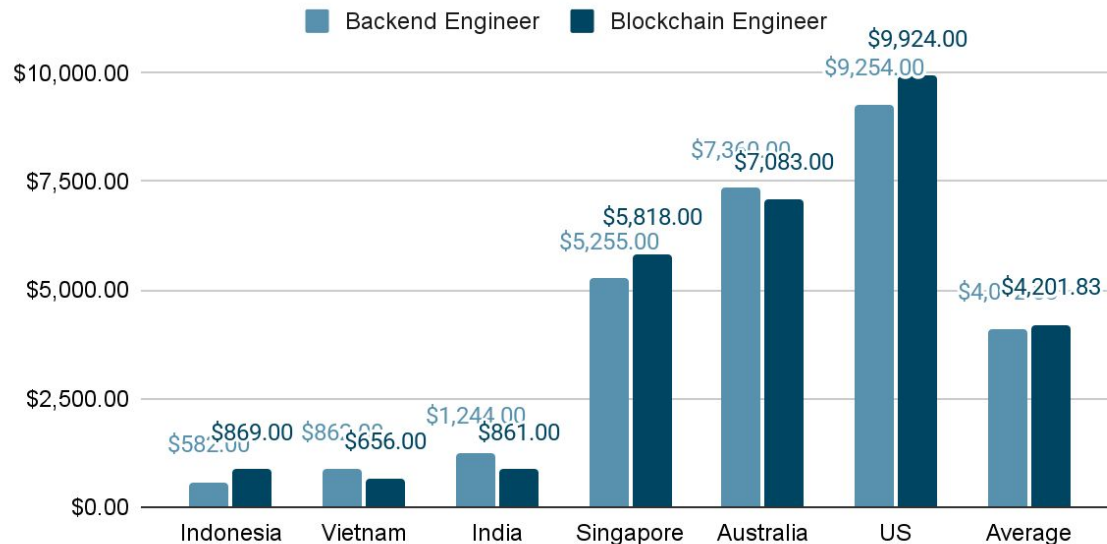
Source: Glassdoor

CONCLUSION

SUMMARY

- Web2 and Web3 engineering methodologies are inherently different.
- Web3 innovations have significantly enhanced the decentralization of technologies traditionally associated with Web2.
- Average salaries between backend engineer and blockchain engineer are comparable.
- Web3 challenges:
    - Technical complexity
    - User experience
    - Regulations
    - Security risks

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"

If crypto succeeds, it's not because it empowers better people. It's because it empowers better institutions.

\- Vitalik Buterin

THANK YOU.
QUESTIONS?

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CLOSING REMARKS