

Welcome To The Insane Future

GenAI + Web 3.0 + XR



The background features a dark navy blue gradient with three glowing, semi-transparent spheres. One sphere is a small blue circle in the top left corner. Another is a large, horizontal oval shape in the top right corner, transitioning from pink to purple. A third is a large, vertical oval shape in the bottom right corner, also transitioning from pink to purple.

**Join Our World where
Generative AI, Web 3.0,
Serverless Cloud, and
Extended Reality (XR) Meet
Modern Full Stack Web
Application Development**

Web 3 and Metaverse

13 Trillion

Citi estimates that total addressable market for the XR and Web 3.0 Economy could grow from \$8 Trillion to \$13 Trillion with 5 billion unique global users by 2030.

[Metaverse and Money: Decrypting the Future](#)



Generative AI could add up to \$4.4 trillion annually to global economy

McKinsey's latest research estimates that generative AI could add the equivalent of \$2.6 trillion to \$4.4 trillion annually across the 63 use cases analyzed by McKinsey -- by comparison, the United Kingdom's entire GDP in 2021 was \$3.1 trillion. This would increase the impact of all artificial intelligence by 15 to 40%.

McKinsey
& Company

A.I. will be the biggest wealth creator in history

AI will be the greatest wealth creator in history because artificial intelligence doesn't care where you were born, whether you have money, whether you have a PhD.

It's going to destroy barriers that have prevented people from moving up the ladder, and pursuing their dream of economic freedom.

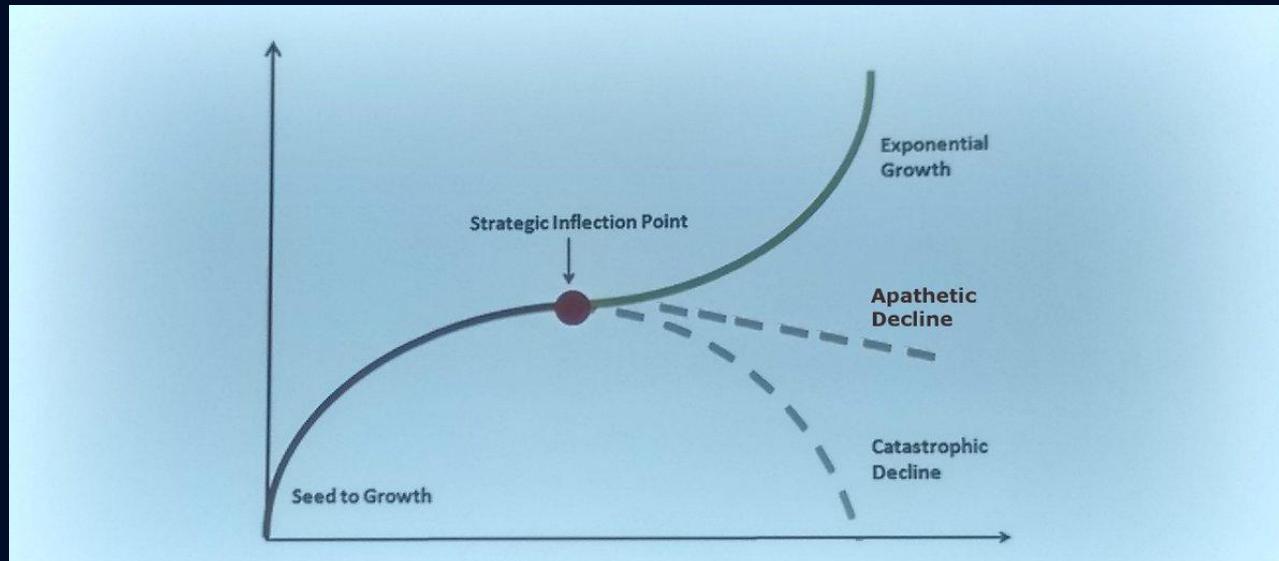
It's already valued at almost \$100 billion, and expected to contribute \$15.7 trillion to the global economy by 2030.

"It's not that if you don't jump on it now, you never can," Higgins says. "It's that now is the greatest opportunity for you to capitalize on it."

Silicon Valley Sees a New Kind of Mobile Device Powered by GenAI

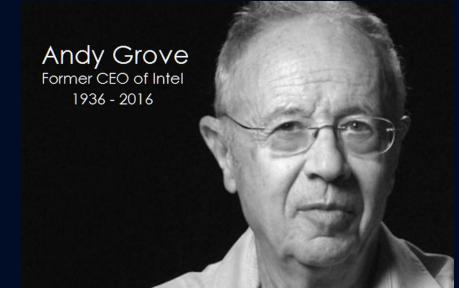
- There's plenty of momentum right now behind the bid to position generative AI as the next new thing. "With many [puzzle pieces] dropping recently, a more complete picture is emerging of LLMs [large language models] not as a chatbot, but the kernel process of a new Operating System"
- "Looking at LLMs as chatbots is the same as looking at early computers as calculators. We're seeing an emergence of a whole new computing paradigm, and it is very early."

Adapt or perish, now as ever, is nature's inexorable imperative



Strategic Inflection Point

Andy Grove
Former CEO of Intel
1936 - 2016



What is the most significant invention in human history?

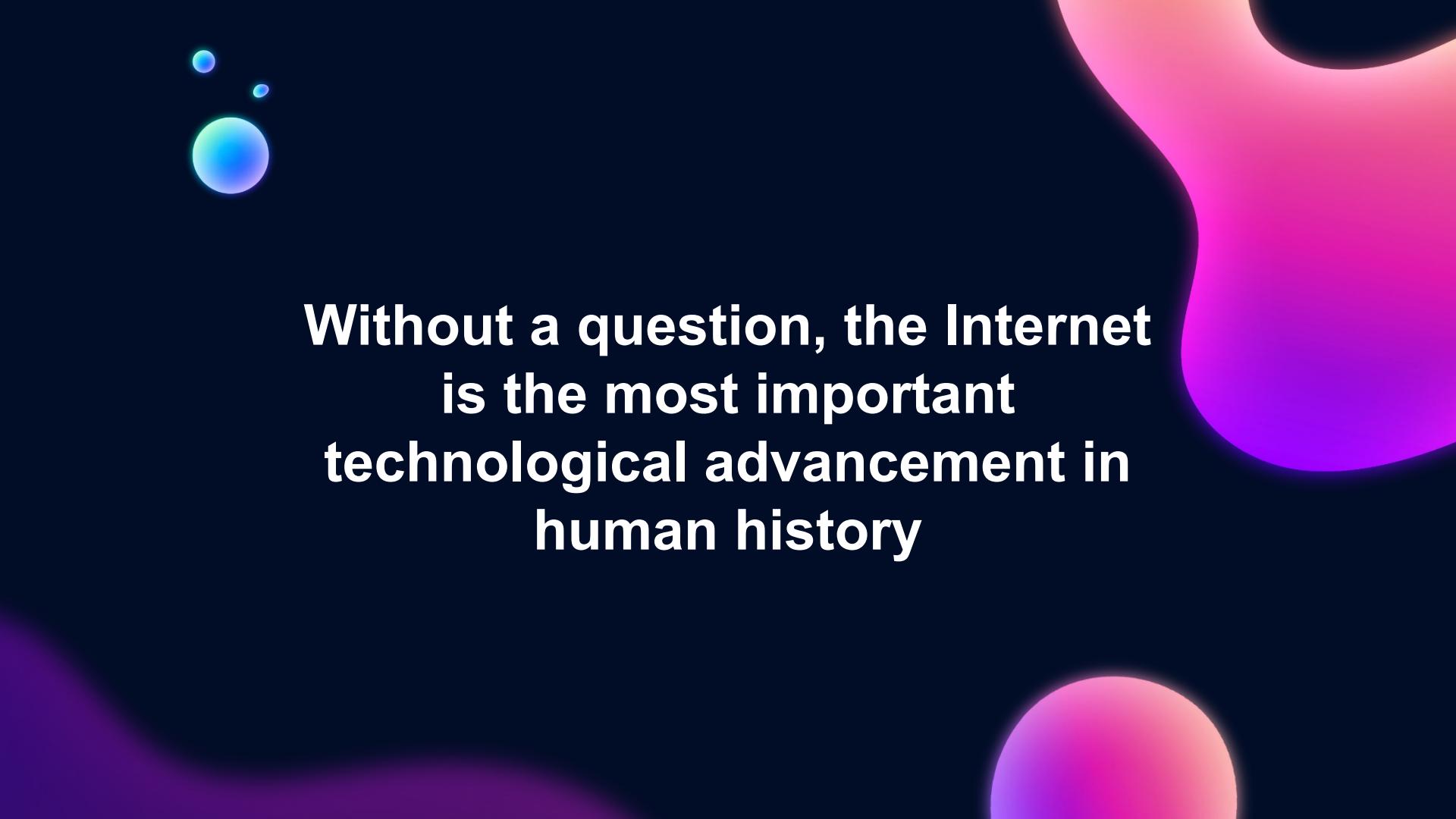


Without these inventions, life would not be the same for us.



THE INTERNET



The background features a dark navy blue gradient. In the upper left corner, there are three glowing, semi-transparent spheres: one large blue sphere and two smaller white spheres. In the lower right corner, there are three large, rounded, glowing shapes transitioning from pink to purple.

**Without a question, the Internet
is the most important
technological advancement in
human history**



The Internet Connects Everyone

- The internet is a global system of interconnected computer networks that is used by billions of people worldwide.
- In **1960** - **First version of internet** (ARPANET) was created by group of scientists working for ARPA of U.S Defense Department.
- In **1989** - **Internet Evolved Further** from the invention of WWW by computer scientist Tim Berners Lee while working at CERN
- **Core Idea of WWW** - Combining the evolving technologies of computer, data networks and hypertexts into global information system.
- **Development of WWW** - it connected the world in a way that it had never been before.

Web1

READ ONLY



Web2

READ-WRITE



Web3

READ-WRITE-GENERATE-OWN

Metaverse

EXTEND THE BOUNDARIES
OF EXPERIENCE

Generative AI

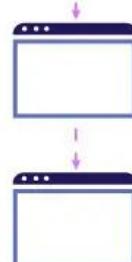
READ - WRITE - GENERATE

Web Application vs Website

Website

Static pages:

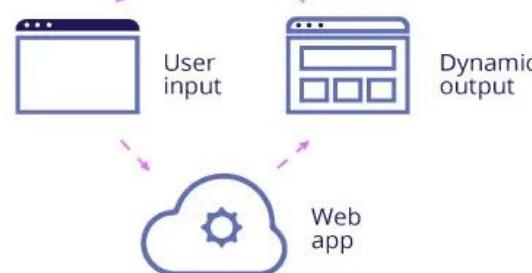
Every user sees the same information each time.



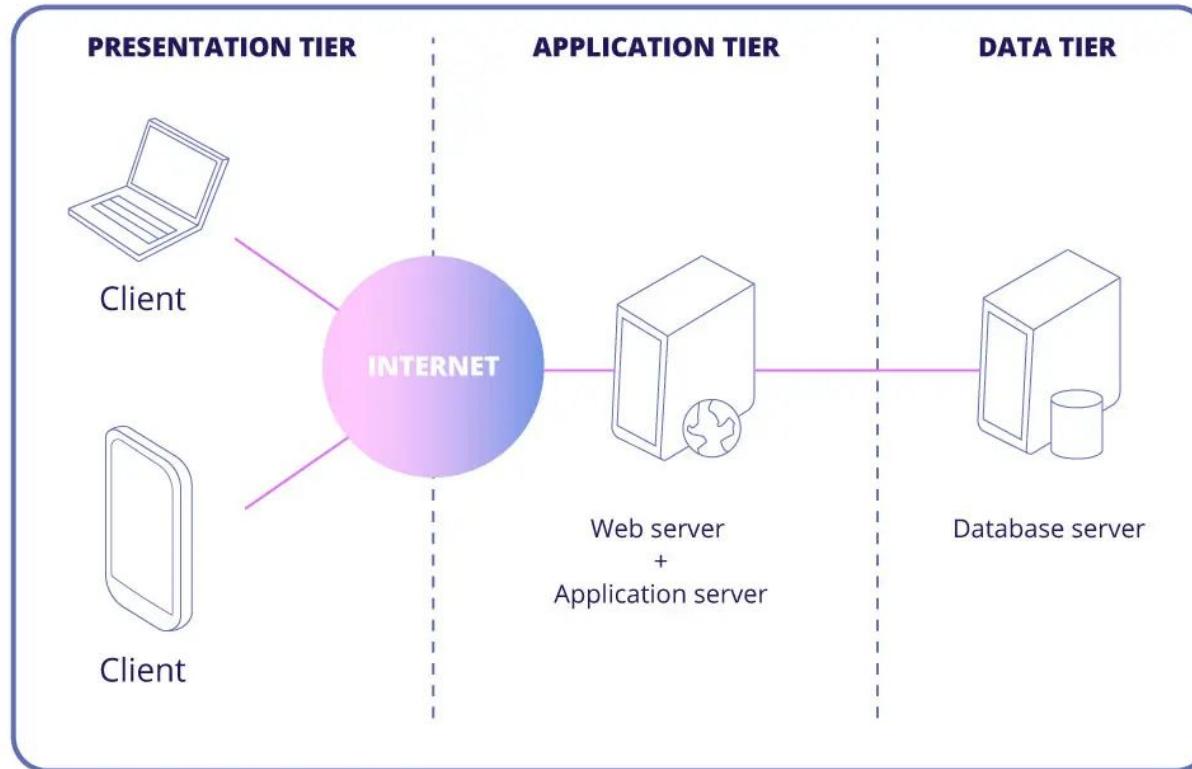
Web Application

Dynamic pages:

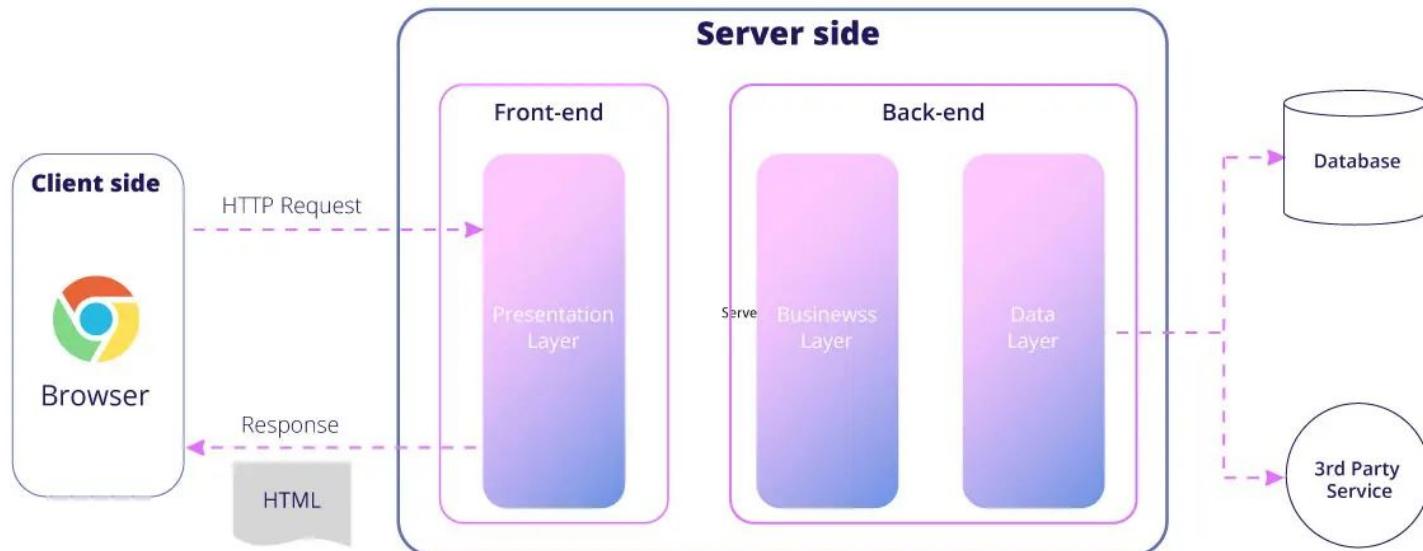
Every user sees the different information each time.



3 TIER ARCHITECTURE IN MODERN WEB DEVELOPMENT



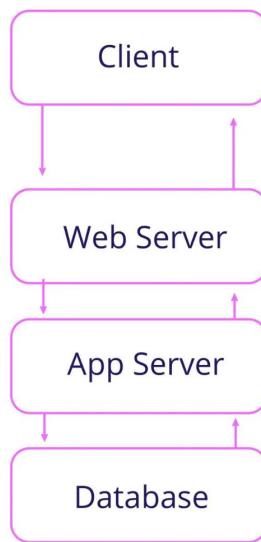
SERVER SIDE RENDERING (SSR)



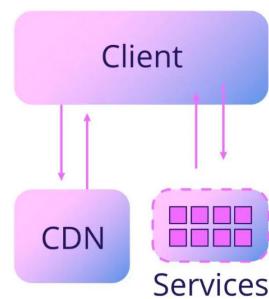
STATIC SITE GENERATION (SSG)

Legacy Web

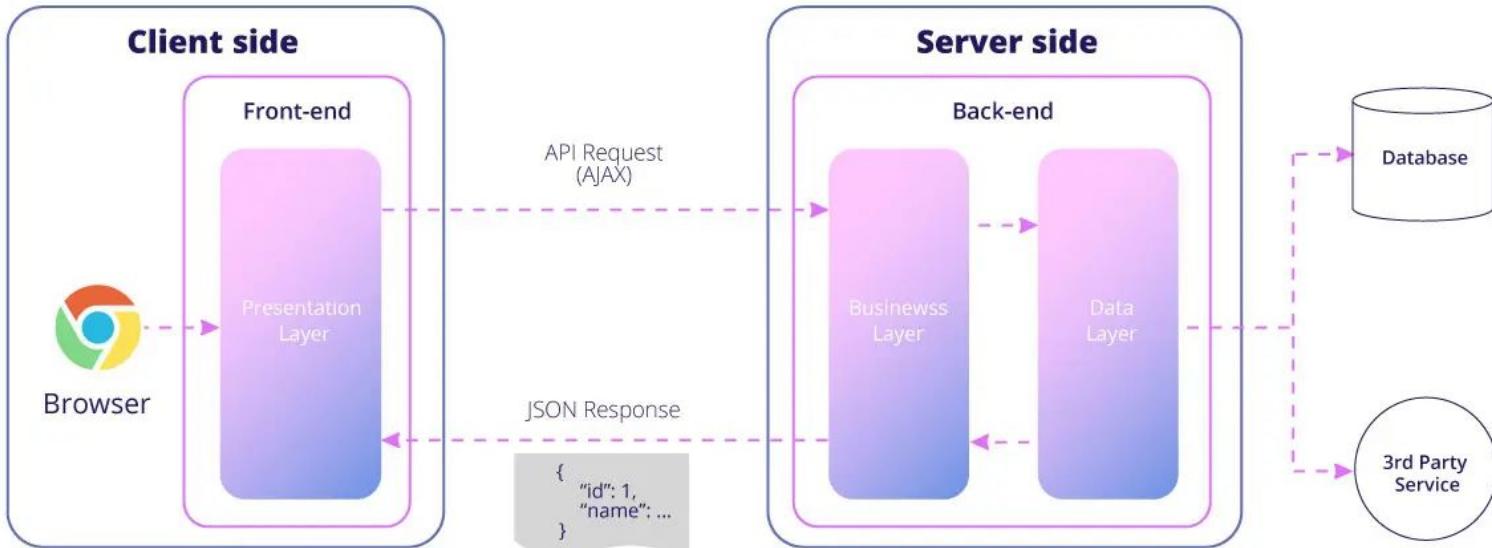
(this site needs to be built EVERY time it's served)



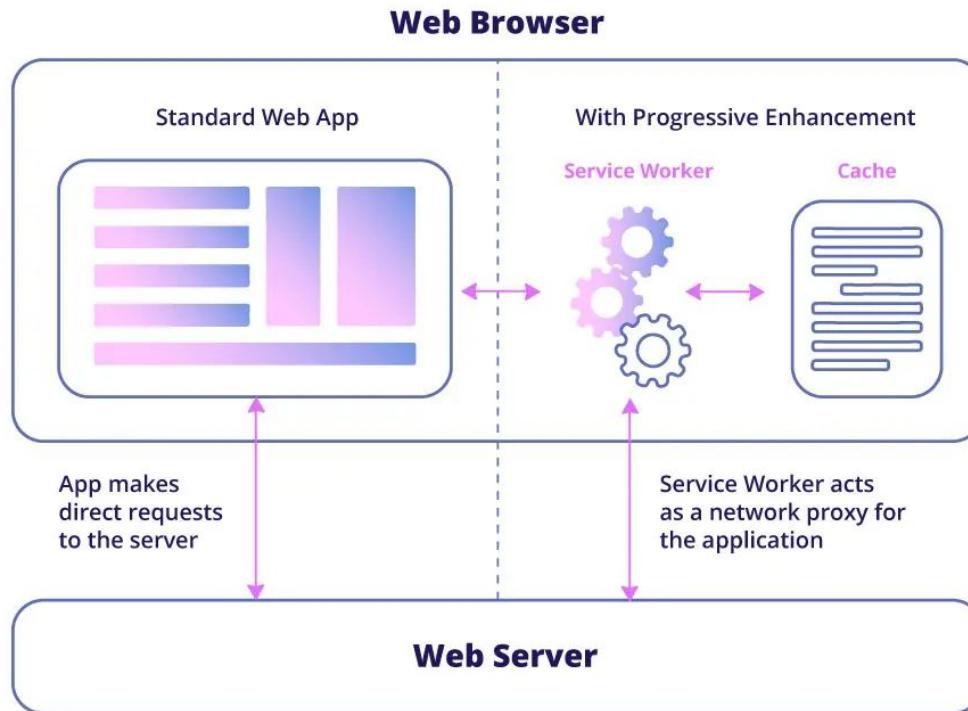
Modern Web



SINGLE PAGE APPLICATION (SPA)



PROGRESSIVE WEB APP (PWA)



Open-source TypeScript is a go-to language for building web apps of all types

Since its official release in 2012, TypeScript has become a crucial language for modern web development (both client and server), adopted by the likes of Slack, Airbnb and of course Microsoft, which built VS Code in TypeScript. The language now has a firm spot in the top programming languages along with JavaScript and Python.



TypeScript



Visual Studio Code

Modern Web Tech Stack

- Node.js
- Next.js 13.5+
- Redux
- Tailwind CSS
- Shadcn/UI
- v0.dev
- Serverless Functions
- REST Serverless APIs
- GraphQL Serverless APIs
- SQL
- Drizzle ORM
- Serverless Postgres Database



This is Unlike Any Other Program



EARN
WHILE YOU
LEARN

Building Full Stack Templates

(Using Modern Web App Stack)

- **Shopify**
- **Woo Commerce**
- **Salesforce**





What is Generative AI?



- Generative AI, or artificial intelligence, is a form of machine learning that is able to produce text, video, images, and other types of content.
- ChatGPT, and Bard are examples of generative AI applications that produce text or images based on user-given prompts or dialogue.



Combining Generative Artificial Intelligence (AI) and the Internet

- Generative AI tools are possible because of the massive amount of data (text and images) available on the Internet.
- The tools are trained on massive data sets that are scraped from Internet sites.
- And now, these generative AI tools are creating massive amounts of new data that are being fed into the Internet.
- Therefore, future versions of generative AI tools will be trained with Internet data that is a mix of original and AI-generated data.

**Just how big is this new
generative AI?**

Think internet-level disruption

Generative AI Tech Stack

(Integrated with Modern Web App Stack)

- LangChain
- Python
- Hugging Face
- Model Fine Tuning
- ChatGPT 4
- Google Bard



Learning Repos: <https://github.com/panaverse/learn-modern-python>
<https://github.com/panaverse/learn-generative-ai>



What is Web 3.0?



- Web 3.0 means immersing yourself in the digital experience, and it involves concepts like individual control of personal data, cryptocurrency, and decentralized record keeping on the blockchain.
- Whereas Web 2.0 operates on fiat money, Web 3.0 relies on cryptocurrencies and a decentralized finance (DeFi) model.

Web3 Tech Stack

(Integrated with Modern Web App Stack)

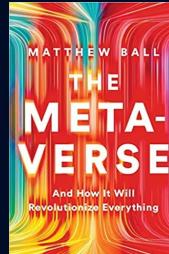
- Ethereum
- Solidity
- Ethers.js
- ERC 20 Token
- NFT
- DOW
- DeFi
- Tokenomics
- Account Abstraction (ERC 4337)



Metaverse and Extended Reality (XR)

“The future of the internet: A massively-scaled, persistent, interactive, and interoperable real-time platform comprised of **interconnected virtual worlds where people can socialize, work, transact, play, and create.**”

—Matthew Ball



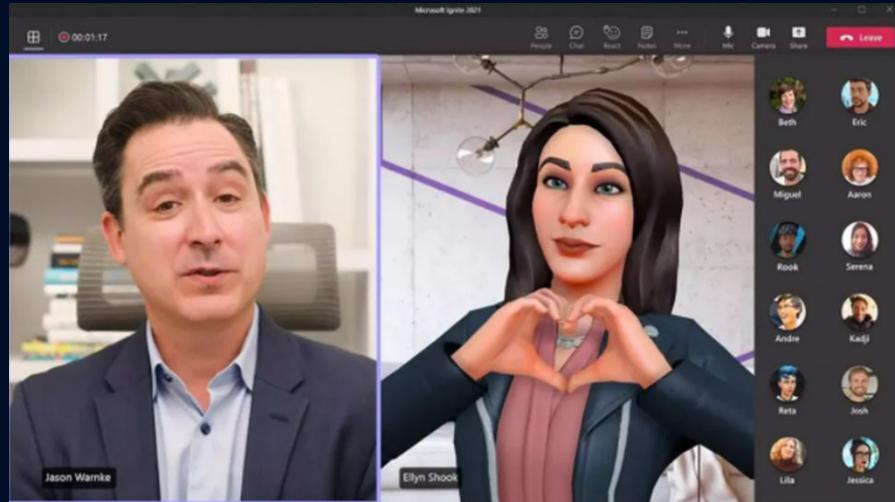
The Metaverse: And How it Will
Revolutionize Everything

“The metaverse is a 3D version of the Internet and computing at large.”



Expression:

- In the Metaverse, each user will have an Avatar, a fully multidimensional living depiction of themselves that can be customised to their choice.
- These Avatars will be rendered with every real feature of user and give sense of reality.



Gross Metaverse Product (GMP)

UAE's economic success to be measured using 'Gross Metaverse Product' instead of GDP

Khaleej Times

**Minister of State for Artificial Intelligence, at Emirate's Metaverse Strategy at the Dubai Metaverse Assembly
Wed 28 Sep 2022**

Metaverse Use Cases



SMART
MANUFACTURING



HEALTHCARE



EDUCATION



DEVELOPER/
CREATOR ECONOMIES



VIRTUAL
ADVERTISING



VIRTUAL SPACES/
COMMUNITIES



SOCIAL
COMMERCE



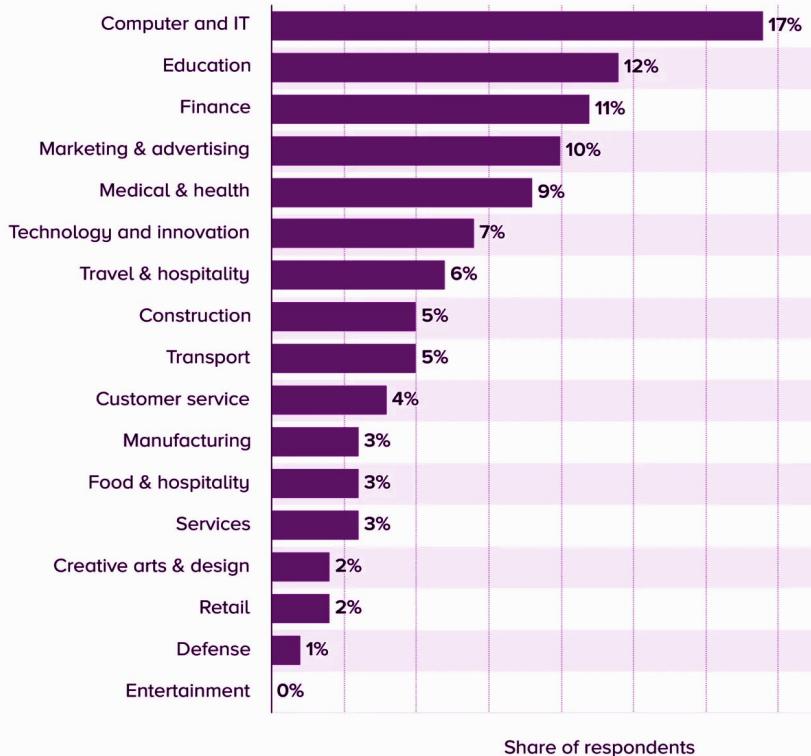
DIGITAL EVENTS/
CONCERTS/TOURISM



VIRTUAL CITIES/
PUBLIC SERVICES

Metaverse Use Cases

Leading business sectors worldwide that have already invested in the Metaverse as of March 2022



Money in the Metaverse

The Metaverse will include existing forms of payments such as credit cards with Fiat money.

In addition, new forms of payments will be accepted:

- Cryptocurrency & Tokens
- Stablecoins
- Central Bank Digital Currencies (CBDCs)



In-Game Tokens



Examples

Robux, Minecraft,
Linden dollars

Key Use Cases

Gaming

Limitations

Withdrawal Limits,
Centralized
Platform T&C, No
Interoperability

Cryptocurrency



Examples

Bitcoin, Ethereum,
Polygon, etc.

Key Use Cases

Virtual lands, NFTs,
Gaming, DeFi

Limitations

Volatility, Energy
Usage (Proof-
of-Work based),
Anonymity and
AML Concerns

Stablecoins



Examples

USDT, USDC, Dai,
BUSD

Key Use Cases

DeFi, International
Payments,
Settlement Currency
for Trading,
Entertainment,
Shopping, Tourism

Limitations

Anonymity and
AML Concerns,
Collateralization
Requirements

CBDCs



Examples

e-CNY, e-Naira,
Sand Dollar

Key Use Cases

Domestic
Payments, Targeted
Subsidies, Public
Affairs, Healthcare,
Tourism

Limitations

Predominant
Domestic Use Case
a Challenge on
Open Metaverse

Fiat Money (Current)



Examples

USD, GBP, EUR, CNY

Key Use Cases

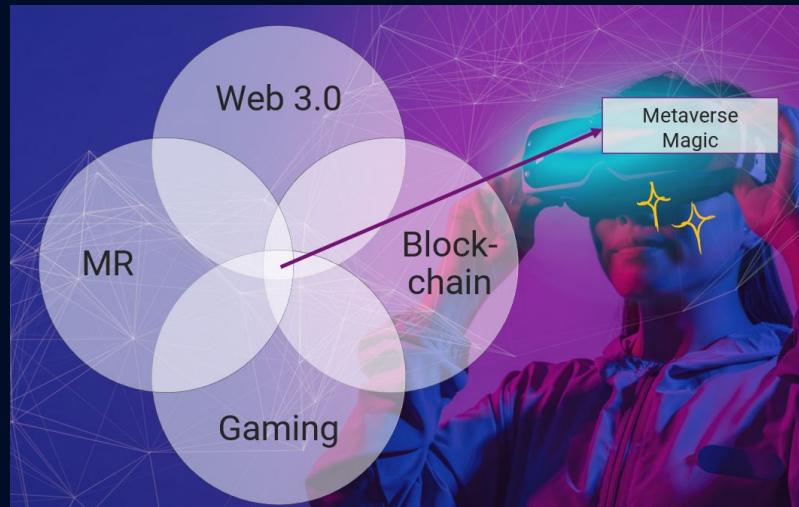
Traditional
Financial Services,
Credit Cards
for Consumer
Protection-Linked
Use Cases

Limitations

Non-Tokenized,
Account-Based,
Micro-Payments
Tough

What does Web 3 have to do with Metaverse?

- Based on ownership and decentralization and facilitated via blockchain, Web3 refers to the conceptual third iteration of the internet.
- The so-called “Open Metaverse” is built upon blockchain – mainly the Ethereum chain – and overlaps with Web3.
- Many Web2 centralized platforms will play an important role in the Metaverse, and even Web3 today relies on elements of centralization.





Global Tech Talent Shortage

- The global talent shortage already amounts to 40M skilled workers worldwide.
- By 2030, the global talent shortage is predicted to reach 85.2M workers. Companies worldwide risk losing \$8.4T in revenue because of the lack of skilled talent.
- According to a CNBC report, the software developer shortage is alarming in 2022. The rate of unfilled IT jobs in USA increased to 918,000 vacancies at the end of 2021.
- Another report noted that by 2030, the number of software job vacancies would rise by almost 22%. The average growth rate of software developers in the USA is only 8% right now, and that clearly emphasizes there is already an overwhelming and severe shortage of skilled workers.



**85 Million
By 2030**

So who will build the Next Internet?



A Global Mass Developer Training Program will Solve the Talent Shortage



XR Tech Stack



WebGPU

Three.js - JavaScript 3D
Library



WebXR

Three.js - JavaScript 3D
Library



Blender

3D Modeling

Panaverse DAO

A decentralized autonomous organization (DAO) is an emerging form of legal structure that has no central governing body and whose members share a common goal to act in the best interest of the entity.

Panaverse DAO will be a hybrid of a business entity and an educational institution for all Web 3 and Metaverse Developers.



www.panaverse.co



What is a DAO?



- A decentralized autonomous organization is an entity structure in which token holders participate in the management and decision-making of an entity.
- There is no central authority of a DAO; instead, power is distributed across **token holders** who collectively cast votes.
- All votes and activity through the DAO are posted on a blockchain, making all actions of users publicly viewable.
- The concept of a DAO is to promote oversight and management of an entity similar to a corporation. However, the key to a DAO is the lack of central authority; the collective group of leaders and participants act as the governing body.



How DAOs Work?

- The voting process for DAOs is posted on a blockchain. Users must often select between mutually-exclusive options.
- Voting power is often distributed across users based on the number of tokens they hold.
- For example, one user that owns 100 tokens of the DAO will have twice the weight of voting power over a user that owns 50 tokens.
- The theory behind this practice is users who are more monetarily invested in the DAO are incentivized to act in good faith.
- DAOs often have treasuries that house tokens that can be issued in exchange for fiat.

Panaverse Community

The concept of a Panaverse DAO will encourage people from all over the world to seamlessly come together to build a single Web 3 and Metaverse vision. With just an internet connection, token holders can interact with other owners wherever they may live.



www.panaverse.co



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