Chapter 2
The Driving Forces Behind Web 3 Growth

Dina Darwish

Ahram Canadian University, Egypt

ABSTRACT

The term "web3 development" refers to the practice of creating and building applications, platforms, and technologies that are designed to operate on the decentralized web, also known as web 3. This new paradigm of web development aims to leverage blockchain technology, decentralized networks, and cryptographic protocols to enable greater user control, privacy, and security. Web 3 development refers to the systematic creation of applications, platforms, and decentralized systems that leverage blockchain technology, cryptocurrencies, and decentralized networks. This procedure additionally involves implementing these applications and platforms. This chapter discusses the web 3 development importance and the driving forces behind web 3 development.

INTRODUCTION

The term Web 2.0 encompasses the phenomenon whereby a multitude of individuals contribute an increased amount of material to cater to a growing audience, according to Simplilearn (Simplilearn, 2023). Web 1.0 is characterized by a limited number of content creators who provide material intended for a wider audience. Web 2.0 places more emphasis on user engagement and active participation compared to its predecessor, Web 1.0, which primarily centered on passive consumption of content.

The user's experience plays a pivotal role in the context of Web 2.0. This phenomenon pertains to the establishment of social media platforms, collaborative efforts, and the development of communal networks. In contemporary society, a significant proportion of individuals see Web 2.0 as the prevailing paradigm for engaging with online platforms.

Web 3, also referred to as Web3.0 (Edelman, 2021; Alford, 2021; Khoshafian, 2021), is a notion for a new version of the World Wide Web that integrates principles such as decentralization, blockchain technology, and token-based economics (Fenwick & Jurcys, 2022). Some engineers and journalists have made the comparison between it and Web 2.0, in which they claim that data and information are

centralized in a small number of businesses that are collectively referred to as "Big Tech."(Mak, 2021). In 2014, Gavin Wood, a co-founder of Ethereum, came up with the name "Web3," and by 2021, cryptocurrency enthusiasts, big technological businesses, and venture capital firms were showing interest in the concept .(Mak, 2021; Read, 2021). The ideas of Web3 were introduced for the first time in the year 2013 (Bodrenko_1, 2013; Bodrenko_2, 2013). Concerns have been raised about the potential for a smaller number of investors and people to accumulate an excessive amount of wealth (Kastrenakes, 2021), as well as the potential for an increased breach of personal privacy as a result of increased data collecting (NRP, 2021).

According to an article published in TechoPedia (TechnoPedia, 2023), Web3 is seen as the subsequent stage of the World Wide Web (WWW). This platform offers users the opportunity to engage with a novel user interface that provides access to a diverse range of resources, including papers, apps, and multimedia content. The concept of Web 3 is still undergoing development, resulting in a lack of consensus over its precise definition. The terminology surrounding the subject matter remains uncertain, since prominent analysis organizations like as Forrester, Gartner, and IDC exhibit inconsistency in their use of either "Web3" or "Web 3.0."

However, it is important to note that Web 3.0 is expected to revolve on the concept of decentralization and is anticipated to include advanced blockchain technology. In addition, the implementation will use machine learning and artificial intelligence techniques to enhance the intelligence and adaptability of the web interface.

In the realm of web development, the significant influence of Web3 cannot be disregarded. The emergence of this novel paradigm signifies a substantial transformation in the construction and engagement of online apps. The emergence of a new phase in the development of the Internet, sometimes denoted as Web 3.0, envision a virtual domain whereby the information you engage with is tailored specifically to your own tastes and areas of interest.

There is an expectation that Web 3.0 will be affected by:

- The use of open-source technologies will be employed in the construction of content platforms.
- The adoption of a trustless approach, whereby Zero Trust, would lead to the extension of network security measures to the edges.
- The distributed nature of interaction among devices, users, and services enables the possibility of operating without the need for clearance from a centralized authority.

The use of blockchain technology will facilitate direct communication between users in the next phase of the internet. Communication among individuals will be facilitated by their participation in a Decentralized Autonomous Organization (DAO), which is a collective entity governed and owned by its community members. The user's data will be safeguarded by a network of publicly accessible smart contracts. The contracts will be kept inside a blockchain, a decentralized network that will be controlled by nodes.

The following predictions pertain to the expected future developments of Web 3:

- The recording of all transactions will be monitored on a distributed ledger that employs blockchain technology, while the transport of data would be decentralized.

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