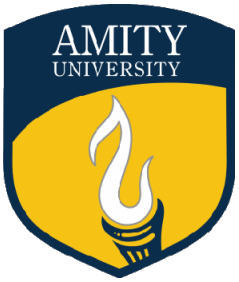
A Project Report

On

# WEB 3.0




Submitted to:

Amity University Uttar Pradesh

In partial fulfilment of the requirements for the award of the degree of

Bachelor of Technology

(Computer Science and Engineering)

By

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Under the guidance of

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AMITY UNIVERSITY UTTAR PRADESH

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## DECLARATION

I**,** *Pranav Kumar* student of B.Tech (Computer Science and Engineering) hereby declare that the project titled "***Web 3.0***" which is submitted by us to Amity School of Engineering and Technology, Amity University Uttar Pradesh, in partial fulfilment of the requirement for the award of the degree of Bachelor of Technology (Computer Science and Engineering), has not been previously formed the basis for the award of any degree, diploma or other similar title or recognition. We hereby declare that we have gone through project guidelines including policy on health and safety, policy on plagiarism, etc.

Place: Noida

Date: 17th July 2022

Pranav Kumar
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# CERTIFICATE

On the basis of declaration submitted by student **Pranav Kumar** of B Tech (CSE), I hereby certify that the Term Paper titled **"Web 3.0"** which is submitted to Department of Computer Science and Engineering, Amity School of Engineering and Technology, Amity University Uttar Pradesh, Noida, in partial fulfilment of the requirement for the award of the degree of Bachelor Of Technology in Data Science is an original contribution with existing knowledge and faithful record of work carried out by him under my guidance and supervision. To the best of my knowledge this work has not been submitted in part or full for any Degree or Diploma to this University or elsewhere.

DATE:17/07/2022.

Dr. Renuka Arora
Associate Professor
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## ACKNOWLEDGMENT

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Last but not the least, we would like to thank our friends and family who provided us with comfort and push that led to improvement in the quality of the project.

Pranav Kumar (A2305221263)

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# Chapter 1- Introduction

## 1.1 About Web 3.0

Web 3.0 (Web3) is the third era of development in web innovation. The Web, otherwise called the World Wide Web, is the hidden layer of Internet utilization that gives sites and application administrations.

Web 3.0 is as yet advancing and characterized, so there is no generally acknowledged standard definition. What is clear, nonetheless, is that Web 3.0 spotlights on decentralized applications and utilizes blockchain-based innovation. Web 3.0 additionally exploits AI and computerized reasoning (AI) to make applications more brilliant and more versatile.

Another viewpoint that is important for the new meaning of Web 3.0 is the idea of Semantic Web. Web creator Tim Berners-Lee promoters the joining of semantic innovation into the web.

It took him over 10 years to go from the first Web, Web 1.0, to Web 2.0, and it is something very similar, while perhaps not more, to completely execute and change the Web utilizing Web 3.0 It is normal to require some investment.

On the off chance that you track the pattern of progress from Web 1.0, a static data supplier where individuals read sites however seldom cooperate, to Web 2.0, an intuitive and social web that empowers joint effort between clients, you can figure that Web 3.0 will change both. How a site is made and the way in which individuals cooperate with it.

## 1.2 Evolution of Web

The World Wide Web is the principal device utilized by billions of individuals to trade, read, compose and speak with others through the Internet. The Web has changed emphatically as of late, and the present applications are scarcely conspicuous from the good 'ol days. The development of the Web is frequently separated into three phases: Web 1.0, Web 2.0, and Web 3.0.

What is Web 1.0?

The main variant of the Internet was known as Web 1.0. Consider Web 1.0 as the read-just or linguistic structure Web. A large portion of the members were purchasers of content, however the creators were fundamentally web engineers who fabricated sites utilizing materials conveyed in text or realistic configuration. Web 1.0 existed around 1991-2004.

The website gave static material in Web 1.0 rather than Dynamic Hypertext Markup Language (HTML). Information and content came from static record frameworks as opposed to data sets, and there was little connection on site pages.

What is web 2.0?

The majority of us have just seen the web in the ongoing variant. It is known as Web 2.0, otherwise called intuitive perusing/composing and the social web. You don't need to be an engineer to partake during the time spent making a Web 2.0 universe. Numerous applications are planned so anybody can be a maker.

You can make considerations and offer them with others on the planet. You can likewise present a video on let large number of individuals view, connect and remark on Web 2.0. Youtube, Facebook, Flickr, Instagram, Twitter and other informal organizations are only a few instances of Web 2.0 applications.

Web advances like HTML5 and CSS3, and Javascript structures like ReactJs, AngularJs, and VueJs permit organizations to foster novel thoughts that permit clients to additionally add to the social web. Subsequently, Web 2.0 is client driven, so engineers just need to plan a system to empower and draw in clients.

Consider how recognizable applications like Instagram, Twitter, LinkedIn, and YouTube contrasted in the good 'ol days contrasted with today. These organizations regularly do the accompanying:

• The organization dispatches the application.

• Join whatever number individuals as could reasonably be expected.

• Then, bring in cash from your client base.

At the point when engineers and organizations discharge famous applications, the client experience frequently turns out to be extremely modern, particularly as the application turns out to be more well known. For this reason they had the option to get momentum so rapidly

in any case. Numerous product organizations are at first unconcerned with adaptation. All things being equal, they are occupied with growing and holding new customers, in any case need to begin creating a gain.

Be that as it may, restricting the utilization of chance assets frequently adversely affects the lifecycle and at last the client experience of a considerable lot of the applications you are at present utilizing. For instance, when an organization raises funding to create an application, financial backers commonly expect a profit from venture that is tens or many times more noteworthy than the speculation. You are many times moved somewhere near information showcasing or deals since you support yourself naturally instead of following a drawn out development procedure.

More information implies more designated promoting for the majority Web 2.0 organizations like Google, Facebook, Twitter and that's just the beginning. This will expand your snaps and, accordingly, your publicizing costs. Utilizing and bringing together client information is the underpinning of the web highlights we know and use today. Therefore, information breaks are normal in Web 2.0 applications. There are likewise committed sites that track information breaks and advise you when individual data is hacked.

You have zero command over how your information is put away or put away on Web 2.0. Organizations frequently track and store client information without consent, truth be told. The organization answerable for these stages possesses and deals with this information. Furthermore, states frequently shut down servers or hold onto financial balances when they accept somebody has offered a viewpoint that is conflicting with the misleading publicity. State run administrations can utilize concentrated servers to effectively upset, control, or shut down applications.

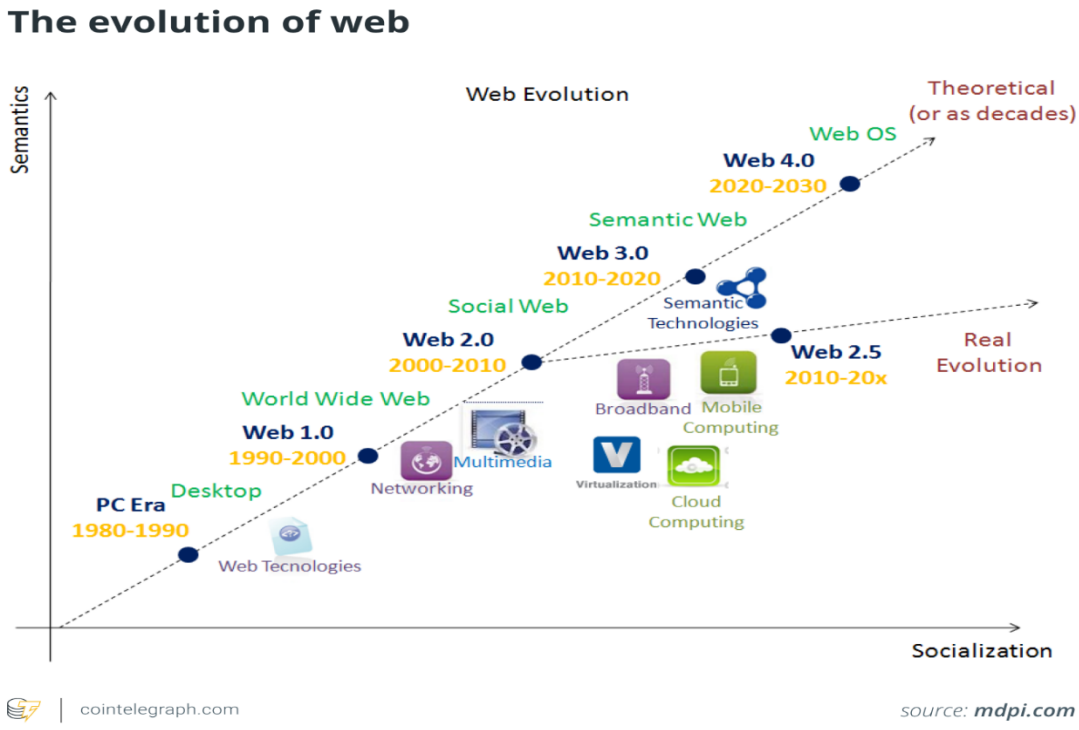
Banks are likewise carefully brought together, which is the reason legislatures regularly mediate in banks. Be that as it may, during times of high unpredictability, inordinate expansion, or other political flimsiness, you might close your ledger or limit admittance to your assets. A significant number of these disappointments are tended to by Web 3.0. Web3.0 tries to essentially reconsider how to assemble and work applications without any preparation.

What is Web 3.0?

Web 3.0, otherwise called the Semantic Web or read/compose execution, is a time (starting around 2010) that clues at the eventual fate of the Web. Utilizing man-made brainpower (AI) and AI (ML), PCs can break down information similarly that people would be able. This permits you to produce and convey significant substance in light of your particular necessities cleverly.

There are a few significant contrasts between Web 2.0 and Web 3.0, however decentralization is at the core of both. Web 3.0 engineers can fabricate and convey applications that sudden spike in demand for a solitary server or store information in a solitary data set (normally facilitated and oversaw by a solitary cloud supplier).

All things being equal, web 3.0 applications are based on a blockchain, a conveyed organization of many shared hubs (servers), or a mixture of the two. These projects are called decentralized applications (DApps) and are frequently caught wind of in the Web3.0 people group. Network members (engineers) are compensated for offering the best types of assistance to lay out a steady, secure and decentralized network.



# Chapter 2- Literature Review- Web 3.0 Technologies and Its Significance in Business

The Web is in another transformative phase that is tenacious and offers huge advantages to the world. There have been many intentional conversations about these web improvements all over the planet. "Web 3.0" alludes to a third-age Internet-based help that all in all comprises of what is known as the "Smart Web" like the Semantic Web, microformats, normal language search, information mining, AI and suggested specialists. . , and man-made brainpower - stress machine-driven comprehension of data to give a more useful and natural client experience" (Spivack, 2007).

As per Garrigos-Simon, Lapiedra-Alcamí and Ribera (2012), Web 3.0 intends that "shrewd machines can peruse, figure out, connect and control information from the internet, which permits various things. Clients and organizations can adjust this". cycle to your requirements. All in all, the internet has a gigantic measure of information. The present innovation permits clients to get to, adjust, reconfigure and influence it to meet their special necessities. Over the long haul, the meaning of Web 3.0 widened as the third era of the Web, made conceivable by the union of a few significant arising innovation patterns. b) versatile web access, and c) cell phones.

Web 3.0 will be more associated, open, and smart utilizing semantic web advances, conveyed information bases, normal language handling, AI, machine derivation, and independent specialists (García, 2008).

Lee (2006) states: "Individuals continue to ask what is Web 3.0 and the Web will be considerably more progressive." Web 3.0 innovation has the accompanying qualities: a) Semantic Web further develops web innovation to produce, share and interface content through search and investigation, in light of the capacity to comprehend the significance of words as opposed to catchphrases or numbers. b) Artificial knowledge joins this component with regular language handling. With Web 3.0, PCs can figure out human-like data and convey quicker, more important outcomes. They will be more smart to address the issues of clients. c) 3D illustrations: 3D plan is generally utilized in Web 3.0 sites and administrations. Exhibition hall guides, PC games, electronic business, geospatial settings, and so forth are instances of the utilization of 3D illustrations. d) Information is more associated thanks to network with Web 3.0 and semantic metadata. Accordingly, the client experience develops

towards one more degree of availability that exploits all the data accessible. e) Ubiquitous: The substance is open from different applications, all gadgets are associated with the web and the help is accessible all over (Lee, 2006).

Organizations of all sizes and types, in all regions of the planet, basically require speedy and enduring choices, which is difficult for think tanks in any association. Administrators in the present exceptionally serious business world should pursue choices in functional, strategic, and vital preparation. Horde gambles are too normal in the pattern of rising client assumptions across all specialty units and require quick and cautious consideration from supervisors to win the hearts of clients. Because of this sort of spotlight on finding a useful answer for the dangers distinguished by the director, the supervisor needs a ton of data to assess to carry out productive social choices. .. Since its beginning, the Web has been exceptionally helpful to get the data that clients need about the items they sell (Web 1.0), and for heads to understand what their convictions are about their items. It has become more significant as a wellspring of data (Web 2.0) and has gone from a perused just worldview to a read/think of one. This improvement has expanded how much data accessible, making it hard for overseers to filter through significant realities and construction data from various sources and in various arrangements.

Web 1.0 associates pages with data, Web 2.0 interfaces individuals, and Web 3.0 connections and associates the information organization, however makes an interpretation of it into information. In Web 3.0, web search tools are supposed to deliver various outcomes for various clients. A client, an inquiry, an outcome relies upon her profile. Web 3.0 arranges and collects the pages found via web indexes by subject and topic. The thought is to peruse, dissect and semantically recognize the bearings of the words to relate the data (Almeida, Santos and Monteiro, 2013). Web 3.0 is the solution to the contextualization of existing data as per the requirements of a specific client. The data gave likewise relies upon the assets of the specialist organization and the qualities of the gadget used to get to the Internet (Naik and Shivalingaiah, 2008). According to a business viewpoint, the development of Web 3.0 depends on three support points: information capacity and arrangement of administrations in the cloud. Virtual entertainment and client produced content to add staff or viewpoint that offers some benefit to outsiders. Progress to a convention that works with gadget network (IPv6).

Web 3.0 trust and security can assume a bigger part, empowering business to develop by empowering personality the executives to guarantee dependability and client instruction that advances great practices for utilizing the Internet. Business streams should be revamped to work with network and computerization, work with client connections, adjust to client reality, and give instruments to think about various kinds and wellsprings of information. Then again, the organization additionally has a few advantages. Extraordinary chance to reconsider business techniques and cycles, more designated showcasing. Worked on functional effectiveness and cost decrease. Web 3.0 trust and protection can assume a bigger part, empowering business to develop by empowering character the executives to guarantee dependability and client instruction that advances great practices for utilizing the Internet. Business streams should be redesigned to work with network and robotization, work with client connections, adjust to client reality, and give a component to think about various kinds and wellsprings of information (Verizon). , 2010).

Web 3.0 offers colossal chances to work on your business, as well as the chance of making another business. Web 3.0 adds includes that permit purchasers to profit from an exceptionally customized insight. Exact response with information on the unique circumstance. Proficient administration of time spent on the web. A significantly more customized web insight (Sabbagh, Acker, Karam, and Rahbani, 2011). Web innovation and virtual entertainment lately are significantly altering the manner in which we carry on with work all over the planet.

# Chapter 3- Research Methodology

The study configuration received for this study is a clear study. The review test configuration depends on territory inspecting and helpful examining. The study depends on essential and optional information. Essential information is gathered from respondents utilizing a very much organized survey. Auxiliary information was gathered from books, magazines, look into articles, magazines, papers and sites. What's more, the information investigated utilizing the factual apparatuses of rate examination.

This section gives a review of procedure embraced to accomplish our examination targets. The part begins with an explanation for picking Social media as the stage for directing our examination. The segments prevail with a short portrayal of inspecting process utilized for gathering the twitter information followed by the depiction of hardware utilized for breaking down same.

## 3.1 Objective of the Study

- To analyse the Evolution of Web 3.0.
- To analyse the importance of Web 3.0.
- To analyze the Web 3.0 Technologies and Its Significance in Business

## 3.2 Data Collection

The sources of the data collected were from previous research papers available online. The research papers were critically analyzed before drawing a conclusion on the research problem.

# Chapter 4- Discussion

Web 3.0 is the third period of Internet suppliers for destinations and applications zeroed in on utilizing machine-based data understanding to give the data driven semantic Web. The definitive motivation behind Web 3.0 is to make more intelligent, more significant and open destinations.

Web 3.0 has not been executed at this point, so there is no reasonable definition. It required over 10 years to go from the main Web, Web 1.0, to Web 2.0, and to completely execute and change the Web utilizing Web 3.0, while perhaps not longer, as well. I want some time. Anyway, the advancement that some acknowledge has been organized, and what describes Web 3.0 is at long last being made. How Web3.0 is currently a development for an enormous home machine utilizing NFTs (Non-Alternate Tokens) with distant associations, the Internet of Things (IoT), digital currencies, and blockchain innovation carrying worth to virtual things This is a model appearing on the off chance that it is influencing.

The example of progress has changed from Web 1.0 (a static information supplier that peruses locales where individuals read destinations however don't convey frequently) to Web 2.0 (an instinctive and social web that upgrades cooperation endeavors between clients). Great, Web 3.0 can be anticipated to change both how destinations are made and the manner in which individuals associate with them. You've presumably heard the maxim "Web 3.0" creep into the web. Fundamentally, Web 3.0 is another time of web advancement. The progressions that Web 3.0 is bringing to the Web take it to an extraordinary level. PC specialists and Internet specialists recognize that these advances make the Web more brilliant and work on our lives. Thus, to comprehend these has a significant impact on in context, we most likely know, so we want to investigate web improvement first.

## 4.1 Properties of Web 3.0

To comprehend the subtleties and nuances of Web 3.0, we should take a gander at the five properties of Web 3.0:

- Blockchain
- Semantic Web
- Man-made reasoning

- 3D Graphics
- Pervasive

## 4.2 Advantages of the Web 3.0:

- Further developed information association: The semantic web is valuable for laying out internet based data organizations.
- Master look
- Best feature.
- Enhance virtual components
- Disperse information to everybody, from a couple of elements with a lot of information to numerous or clients, giving everybody more noteworthy command over information.
- Make the web safer.
- A lot more prominent chance for everybody on the Internet, particularly for content makers.
- Brilliant agreements to perform questionable exchanges with one another without the requirement for a mediator or underwriter.
- More useful web perusing.
- Influential reaction.
- Change human coordinated effort.
- More applicable and precise query items.
- Customized web makes chipping away at the web a lot more straightforward.
- Simpler to share information.

## 4.3 Disadvantages of Web 3.0:

- Less high level devices don't have the choice to deal with Web3.0.
- Web 1.0 locales give off an impression of being altogether obsolete
- Novices can be exceptionally confounded about understanding.
- Numerous regulations must be changed for wellbeing and responsibility for.
- Current innovation has a lot higher carbon dioxide discharges than its ancestor, so it should be all the more harmless to the ecosystem.

- The innovation isn't yet completely prepared.
- Effectively get public/confidential client data.
- Individuals will invest more energy riding the web.
- A protection strategy is required.

# Chapter 5- Result

Web 3.0 profoundly grows the scale and extent of human-machine connections a long ways past what we can envision today. From consistent installments to more finish data streams and solid information moves, these communications are made conceivable by fundamentally extending the scope of likely counterparties. Web 3.0 permits you to connect with individuals and machines all over the planet without going through a paid mediator. This change empowers a totally different influx of business and plans of action up until recently never envisioned. From worldwide cooperatives to decentralized independent associations and independent information markets.

The reasons this is significant are:

- Society could be more proficient by lessening outsider lease authorities and returning this worth straightforwardly to arrange clients and suppliers, without mediating in the business.
- Associations can basically build strength to change through another lattice of more versatile friend correspondence and administration associations between members.
- People, organizations and machines can share more information and guarantee more protection and security.
- Empower future-prepared business visionaries and speculation exercises by practically annihilating the gamble of stage reliance seen today.
- You can claim your own information and advanced impression by utilizing provable computerized information shortage and tokenized computerized resources.
- Through "present day common" proprietorship and administration of these new decentralized knowledge frameworks, as well as refined and dynamic monetary motivations, already troublesome or "inadequately scattered" network members. We can cooperate to take care of the issue.

The following rush of Web 3.0 goes a long ways past the early use cases for digital currencies. Web 3.0 interfaces individuals, business and machine information with strong AI calculations, scrambling and interfacing with a drastically new market through the rich discourse accessible today and the worldwide cluster of accessible counterparties. The outcome is like "Return to Global Village". It targets exceptionally customized, beforehand

helpful, human-driven cooperation each night, yet is currently presented on a worldwide Internet scale, with a heap of specific areas of human and machine abilities.

# Chapter 6- Importance for the future

Web 3.0 is a client situated framework planned by clients as a client driven stage.

Here are a portion of the fundamental justifications for why web3 will be significant in the years to come:

- Diminished dependence on unified storehouses: Web 3.0 attempts to make the Internet a different source, keeping away from programmers, breaks, and dependence on concentrated vaults. With the absence of certain information and tokenized advanced resources, clients can claim their own information and computerized impression. Neither one of the stages is liable for the utilization of information.
- More customized connections: Web 3.0 will turn out to be progressively significant in 2022, as most of clients will keep on focusing on customized and individual perusing experiences on the web.
- Better AI-controlled search help: Much more brilliant, more predominant, and popular for semantic, blockchain, and acculturated AI-fueled advanced search partners.
- Decreased dependence on go betweens: Eliminate brokers, cut out lease looking for agents, and offer this benefit straightforwardly to clients and suppliers in your organization. Network clients cooperate to resolve gives that were beforehand hard to control with shared possession and administration of these new decentralized insight structures.
- Improved Peer-to-Peer Connectivity: With the development of the new Internet, associations among individuals and associations remain areas of strength for innately keep straight with more versatile distributed cooperations and administration... Distributed network permits people to , organizations and machines share more information while keeping up with more noteworthy protection and security.
- Building Trust: Knowledge of the up and coming age of the Internet can decrease dependence on individual stages for future-evidence business and speculation exercises.

# Chapter 7- Conclusion

Among the advantages of the new Internet are further developed personalization, more intelligent and more sympathetic hunt colleagues, and other decentralized highlights that make it simpler to construct a fair web that enables clients. Sites and applications are developing to give a more vivid web insight in light of the enormous blast of accessible information. There is no unmistakable meaning of Web 3.0, however the advancement is as of now in progress. Obviously blockchain is a vital part representing things to come of Web 3.0. Web3 is important for a critical new age of mechanical advances that affect business and IT. This has extensive outcomes that assist organizations with distinguishing critical potential and keep away from future traps. Web3 is exceptionally encouraging and will be vital in remaking a few areas all the while.

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