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Top 10 Technology Innovations we can Expect in 2022

In today's fast-moving digitalized world, technological innovations are taking place in the blink of an eye. With advanced technologies, such as IoT, AI, blockchain, AR and more being a part of the core strategy of organizations, innovations are driving industries to revolutionize and accelerate the digital transformation. Since Covid-19, the need for digitalization and tech innovations has fastened up and established its importance in today's world. 2020 and 2021 have seen major developments in blockchain adoption, smart manufacturing, AR augmented retail applications and more. Thus, 2022 also shall bring in a wave of newer trends and applications of such technologies and it is exciting to see what lies ahead of us in terms of tech innovation offerings. Here are some trends we can expect in 2022 and beyond:

AI-Enabled Automation/ Hyperautomation

AI is known to power automation in various fields of business. Hyperautomation facilitates automation of most processes, reduces human intervention, fastens the pace of operations, and thus is highly beneficial for businesses. Ever since Covid-19 hit the world, the need for automating processes has been on the rise. To catalyze productivity and reduce costs, hyperautomation seems to be highly efficient. 2022 and beyond shall see increased adoption of hyperautomation across industries worldwide. Gartner predicts that the worldwide hyper automation-enabling software market will likely reach nearly \$600 billion by 2022. In this digital-first world, hyperautomation has become a necessity in order to fasten up the digital transformation/acceleration process.

Decision Intelligence (DI) On The Rise

Decision-making powered by technologies such as Artificial intelligence, machine learning, etc., allows for businesses to make data-driven, insightful, and faster decisions. These decisions are backed with significant data, and allow for problem-solving as well. Banking and finance giants, Morgan Stanley and Lloyds group use DI for their wealth management platform and other business processes, which gives them the opportunity to analyze customer behavior,

attend to their needs better and give a personalized touch. Gartner predicts that by 2023, a third of organizations will be using DI for structured decision-making.

Smart City Adoption

Forbes too talks about how smart city technologies will emerge to be a rising software trend in 2022 and beyond as the urban population demands more efficient and smarter cities. The global smart city market size is expected to grow from USD 457.0 billion in 2021 to USD 873.7 billion by 2026, at a CAGR of 13.8% during the forecast period. IoT, sensor technology, blockchain, and more play integral roles in smart city development. These digital technologies enable better decision-making, facilitate improved traffic management, energy conservation, climate control, and better quality of life.

5G

A wide range of industries from computing, manufacturing, healthcare, entertainment, and more have increased their adoption of 5G to enable a more connected and digitized world. 5G has the capability to address and work with technologies such as 3D robotic control, virtual reality monitoring, and more. It enables connectivity among objects, devices, machines, and more. 5G technology is the next advanced evolution of 4G and aims to enable a much faster pace of activities when compared to 4G. The 5G subscriptions worldwide are expected to cross 1 billion in 2022 (Statista). According to a McKinsey report, in the B2B sphere, the total revenue for 5G IoT modules is expected to increase from USD 180 million in 2022 to USD 10 billion by 2030. This signifies the high growth rate 5G is expected to rise at. Also, by 2025, 5G networks are expected to cover one-third of the world's population (GSMA). Qualcomm, Ericsson, Samsung, Huawei, are some of the main 5G players in the market.

Everything Blockchain

IDC reports that in 2021, nearly \$6.6 billion will be spent on blockchain solutions this year, which is 50% higher than 2020 and will also face a 75% increase in 2022 amounting to \$11.7 billion. It also reports that blockchain

spending will see an increased growth (2020-2024) at a CAGR of 48%. It is also said that blockchain services will be utilized to track the distribution and delivery of vaccines in 2022. This application is also being increasingly adopted by retailers to track the delivery of products to customers more efficiently than ever. NFTs powered by blockchain technology are gaining relevance to claim one's right over a digital asset. In 2022, it is also expected that blockchain-as-a-service shall be offered by major companies such as Amazon, Microsoft, IBM, etc. leading to the accessibility of blockchain in the marketplace. Acceptance of cryptocurrency in retail and other sectors is also considered as a possible change coming up in 2022 which brings us to the next trend below.



Cryptocurrency

Cryptocurrency has been the talk for a while now. In 2022 too, it is expected to grow to be a more relevant and adopted form of investment. Since Covid-19 cryptocurrencies have been through a roller coaster but this has not stopped the entry of newer cryptocurrencies into the cryptocurrency market apart from the well-known Bitcoin, Ethereum, and so on. Currently, the second-largest cryptocurrency Ethereum may take over Bitcoin's first position in 2022 (Yahoo News). The acceptance of cryptocurrency as a legal method of payment may also

increase in 2022 which will tackle its major obstacle and make room for newer cryptocurrencies and innovations within them. To tackle the unregulated nature of cryptocurrency and make it a viable payment method/currency, many countries such as China plan to launch their own digital currency. This will also reduce the misuse of cryptocurrencies. The retail industry too can expect major changes if retailers start accepting crypto as a method of payment, for which buzz was already created by Amazon in 2021 when it considered Bitcoin for product payments. Innovations to reduce the carbon footprint while mining such currencies can also be expected as the world urges us to take further careful steps and decisions keeping a greener environment in mind. Thus possibilities with innovations in terms of cryptocurrencies seem endless in 2022 and beyond.

Generative AI

Yet another application of AI, generative AI is set to raise the standards of AI use cases and provide reasons for organizations around the world to adopt it. It works on an algorithm that has the capability to use data in form of text, audio, images, and so on and generate similar content. This self-learning algorithm allows for higher-quality outputs. This application of AI comes with its set of limitations, and thus provides room for innovations and opportunities to come up with technologies/ways to tackle them. Healthcare can be majorly benefitted from generative AI, and IBM has already begun to leverage it by researching Antimicrobial peptides to find drugs for Covid-19. Gartner predicts that by 2025, generative AI may account for 10% of all data produced, which currently lies at 1% today.

Technologies Running Smart Devices

From smart cars to wearables such as smartwatches, to TVs, smartphones, and more, various technologies have resulted in making our lives more convenient and tech-driven. IoT is one of the major driving technologies behind this connectedness of smart devices. The number of wearable connected devices is forecasted to reach more than 1 billion by 2022 as per Statista. With many more brands entering this segment, we can expect newer and interesting features added to the list. The wearables market, though dominated by smartwatches, is

seeing many new products such as hearables, smart patches, and more. Applications of smart wearables in today's Covid-19 era, to track Covid symptoms was a relevant and much-needed innovation and will continue to be as we fight to get rid of Covid-19 in 2022 too. Presently 4G, but 5G soon too will help with the connectivity of such devices. As per Statista, the number of wearable devices linked to 4G will increase by 89 million in 2022, connecting over 900 million people. Newer innovations such as smart helmets are also about to experience growth as they come with interesting features such as tracking speed, stamina, listening to music, GPS services, and more.



Cloud-Native Platforms (CNPs)

Gartner predicts that by 2025, 95% of all new digital initiatives will have CNP as their foundation, up from the current 40% in 2021. In the current times, the need to adopt cloud-native application/approach rather than the traditional on premises approach of infrastructure is more evident than ever. Mckinsey reports that by 2022, more than 70% of enterprises will depend on some form of cloud management tool for various business purposes. Taking cloud computing up a notch, CNPs aim to make infrastructure management effortless. Speed of service, reduced costs, auto scalability and more are some benefits of CNP. The global

cloud revenue is \$474 billion in 2022, as it becomes the core of business operations in this ever-so digitized world.

AR/VR Powered “Virtual Try On”

Revolutionizing the retail industry, this AR/VR trend is making heads turn with its innovative and catchy virtual try-on capability. In-store- AR mirrors/Smart mirrors provide a delightful experience to customers as they allow them to virtually try on clothes which also saves their time and effort to a great extent. According to Businesswire, the application of VR and AR in the retail market is projected to reach US\$ 17864.86 million by 2028 from US\$ 3790.94 million in 2021 at a CAGR of 24.8% for the forecasted period. This depicts the scope of innovation and adoption that is about to happen in this field. As of now, only major brands such as Ikea, Loreal, Nike, and so on are leveraging the potential of AR/VR applications in retail and hopefully, 2022 will see further increased adoption. Read more about applications of AR/VR we can see in the retail sector in 2022 and beyond here.

MR. AMIT RANJITBHAI PATEL

ASST. PROFESSOR

UNKNOWN FACTS ABOUT GMAIL

1. Gmail or Google Mail was launched on April 1 in 2004 by Paul Buchheit.
2. At the initial stage, It started as an invitation-only beta release. In 2007, 7th February, Gmail became available as a public version.
3. The email service provider came with 1 GB cloud storage, which has now increased to 15 GB.
4. According to 2015, 75% of Gmail users that open and check their email on mobile devices.
5. It also introduced window chat and advanced search platforms.
6. The secret behind Gmail user-friendly interface is that it introduced the web development technique named, Ajax.
7. Gmail became the first mobile app on Google Play store to hit 1 billion installations on Android devices.
8. The average age of Gmail user is 30 years.
9. As per 2014, 94% of Internet population that Gmail language translation covers.
10. As per 2017 record, 1.2 billion people use Gmail.

CHIRAG DEVENDRABHAI MEHTA

ASST. PROFESSOR

TOP 10 ANDROID APP OF THE MONTH JANUARY 2022

1. Cast to TV
2. DINA: Personalized Weather
3. Legion Network
4. Matrix Code
5. NASCAR Tracks
6. Pro Wear Calendar
7. SafeUP
8. AShadow Galaxy Anniversary
9. Sleep.com Sleep Cycle Tracker
10. Tracker Detect

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TOP 10 IOS APP OF THE MONTH JANUARY 2022

1. WeTransfer
2. ChargePoint
3. Shipt
4. GoSatWatch Satellite Tracking
5. Gadget Flow
6. ScreenKit
7. Unit Converter
8. Afterlight
9. Dualgram
10. BlockFi

PATEL VRUSHANGI MEHULBHAI

19BCA106



AMRELIYA NIRALI NARESHBHAI

20BCA03



PATEL KHUSHI SHAILESHBHAI

19BCA91