Top 9 New Technology Trends for 2021

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Technology today is evolving at such a rapid pace, enabling faster change and progress, causing an acceleration of the rate of change, until eventually, it will become exponential. However, it is not only technology trends and top technologies that are evolving, a lot more has changed this year due to the outbreak of COVID-19 making IT professionals realize that their role will not stay the same in the contactless world tomorrow. And an IT professional in 2020-21 will constantly be learning, unlearning, and relearning (out of necessity if not desire).

What does this mean for you? It means staying current with new technology trends. And it means keeping your eyes on the future to know which skills you’ll need to know to secure a safe job tomorrow and even learn how to get there. All bows to the worldwide pandemic, most of the global IT population is sitting back, working from home. And if you wish to make the most of your time at home, here are the top 9 new technology trends you should watch for and make an attempt at in 2021, and possibly secure one of the jobs that will be created by these new technology trends.

Here is the list of the top 9 new and trending technologies:

1. Artificial Intelligence (AI) and Machine Learning
2. Robotic Process Automation (RPA)
3. Edge Computing
4. Quantum Computing
5. Virtual Reality and Augmented Reality
6. Blockchain
7. Internet of Things (IoT)
8. 5G
9. Cyber Security

1. Artificial Intelligence (AI) and Machine Learning

[Artificial Intelligence](https://www.simplilearn.com/tutorials/artificial-intelligence-tutorial/what-is-artificial-intelligence), or AI, has already received a lot of buzz in the past decade, but it continues to be one of the new technology trends because its notable effects on how we live, work and play are only in the early stages. AI is already known for its superiority in image and speech recognition, navigation apps, smartphone personal assistants, ride-sharing apps and so much more.

Other than that AI will be used further to analyze interactions to determine underlying connections and insights, to help predict demand for services like [hospitals](https://www.simplilearn.com/ai-in-healthcare-article) enabling authorities to make better decisions about resource utilization, and to detect the changing patterns of [customer behaviour](https://www.simplilearn.com/using-ai-in-ecommerce-the-complete-guide-pdf?source=frs_category)by analyzing data in near real-time, driving revenues and enhancing personalized experiences.

The AI market will grow to a [$190 billion industry by 2025](https://www.marketsandmarkets.com/Market-Reports/artificial-intelligence-market-74851580.html) with global spending on cognitive and AI systems reaching over [$57 billion in 2021.](https://www.idc.com/itexecutive/research/topics/ai) With AI spreading its wings across sectors, new jobs will be created in development, programming, testing, support and maintenance, to name a few. On the other hand AI also offers some of the highest salaries today ranging from over [$1,25,000 per year](https://www.linkedin.com/salary/machine-learning-engineer-salaries-in-united-states) (machine learning engineer) to [$145,000](https://www.paysa.com/salaries/artificial-intelligence-architect--t) per year (AI architect) - making it the top new technology trend you must watch out for!

[Machine Learning](https://www.simplilearn.com/tutorials/machine-learning-tutorial/what-is-machine-learning) the subset of AI, is also being deployed in all kinds of industries, creating a huge demand for skilled professionals. [Forrester](https://go.forrester.com/press-newsroom/)predicts AI, machine learning, and automation will create 9 percent of new U.S. jobs by 2025, jobs including robot monitoring professionals, [data scientists](https://www.simplilearn.com/big-data-and-analytics/senior-data-scientist-masters-program-training), automation specialists, and content curators, making it another new technology trend you must keep in mind too!

Mastering AI and machine learning will help you secure jobs like:

* AI Research Scientist
* AI Engineer
* Machine Learning Engineer
* AI Architect

2. Robotic Process Automation (RPA)

Like AI and Machine Learning, [Robotic Process Automation, or RPA](https://www.simplilearn.com/tutorials/rpa-tutorial/what-is-rpa), is another technology that is automating jobs. RPA is the use of software to automate business processes such as interpreting applications, processing transactions, dealing with data, and even replying to emails. RPA automates repetitive tasks that people used to do.

Although Forrester Research estimates RPA automation will threaten the livelihood of [230 million or more](https://www.cio.com/article/3124638/it-industry/why-bots-are-poised-to-disrupt-the-enterprise.html) knowledge workers or approximately 9 percent of the global workforce, RPA is also creating new jobs while altering existing jobs. McKinsey finds that[less than 5 percent of occupations can be totally automated](https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/four-fundamentals-of-workplace-automation), but about 60 percent can be partially automated.

For you as an IT professional looking to the future and trying to understand new technology trends, RPA offers plenty of career opportunities, including developer, project manager, business analyst, solution architect, and consultant. And these jobs pay well. An [RPA developer](https://www.simplilearn.com/how-to-become-an-rpa-developer-article) can earn over ₹534K per year - making it the next technology trend you must keep a watch on!

Mastering RPA will help you secure high paying jobs like:

* RPA Developer
* RPA Analyst
* RPA Architect

3. Edge Computing

Formerly a new technology trend to watch, cloud computing has become mainstream, with major players [AWS](https://www.simplilearn.com/tutorials/aws-tutorial) (Amazon Web Services), [Microsoft Azure](https://www.simplilearn.com/tutorials/azure-tutorial) and Google Cloud Platform dominating the market. The adoption of cloud computing is still growing, as more and more businesses migrate to a cloud solution. But it’s no longer the emerging technology trend. Edge is.

As the quantity of data organizations are dealing with continues to increase, they have realized the shortcomings of cloud computing in some situations. [Edge computing](https://www.simplilearn.com/edge-computing-vs-cloud-computing-article) is designed to help solve some of those problems as a way to bypass the latency caused by cloud computing and getting data to a datacenter for processing. It can exist “on the edge,” if you will, closer to where computing needs to happen. For this reason, edge computing can be used to process time-sensitive data in remote locations with limited or no connectivity to a centralized location. In those situations, edge computing can act like mini datacenters.

Edge computing will increase as use of the Internet of Things (IoT) devices [increases](https://www.simplilearn.com/iot-applications-article). By 2022, the global edge computing market[is expected to reach $6.72 billion](https://www.linkedin.com/pulse/cloud-edge-computing-stats-you-need-know-2018-david-ricketts/). And this new technology trend is only meant to grow and nothing less, creating various jobs, primarily for software engineers.

Keeping in line with cloud computing (including new-age edge and quantum computing) will help you grab amazing jobs like:

* Cloud Reliability Engineer
* Cloud Infrastructure Engineer
* Cloud Architect and Security Architect
* DevOps Cloud Engineer

4. Quantum Computing

Next remarkable technology trend is quantum computing, which is a form of computing that takes advantage of quantum phenomena like superposition and quantum entanglement. This amazing technology trend is also involved in preventing the spread of the coronavirus, and to develop potential vaccines, thanks to its ability to easily query, monitor, analyze and act on data, regardless of the source. Another field where quantum computing is finding applications in banking and finance, to manage credit risk, for high-frequency trading and fraud detection.

Quantum computers are now a multitude times faster than regular computers and huge brands like Splunk, Honeywell, Microsoft, AWS, Google and many others are now involved in making innovations in the field of Quantum Computing. The revenues for the global quantum computing market are projected to surpass [$2.5 billion by 2029.](https://www.statista.com/statistics/1067216/global-quantum-computing-revenues/) And to make a mark in this new trending technology, you need to have experience with quantum mechanics, linear algebra, probability, information theory, and machine learning.

5. Virtual Reality and Augmented Reality

The next exceptional technology trend - Virtual Reality (VR) and Augmented Reality (AR), and Extended Reality (ER). VR immerses the user in an environment while AR enhances their environment. Although this technology trend has primarily been used for gaming thus far, it has also been used for training, as with[VirtualShip](https://gdit.com/maritime-simulation-virtualship), a simulation software used to train U.S. Navy, Army and Coast Guard ship captains.

In 2021, we can expect these forms of technologies being further integrated into our lives. Usually working in tandem with some of the other new technologies we’ve mentioned in this list, AR and VR have enormous potential in training, entertainment, education, marketing, and even rehabilitation after an injury. Either could be used to train doctors to do surgery, offer museum-goers a deeper experience, enhance theme parks, or even enhance marketing, as with this[Pepsi Max bus shelter](https://www.youtube.com/watch?v=Go9rf9GmYpM&feature=youtu.be).

Fun fact: 14 million AR and VR devices were sold in 2019. The global AR and VR market is expected to grow to [$209.2 billion by 2022](https://techjury.net/blog/virtual-reality-statistics/#gref), only creating more opportunities in the trending technology, and welcoming more professionals ready for this game-changing field.

While some employers might look for optics as a skill-set, note that getting started in VR doesn’t require a lot of specialized knowledge - basic [programming skills](https://www.simplilearn.com/programming-bootcamp-article) and a forward-thinking mindset can land a job; another reason why this new technology trend should make up to your list of lookouts!

6. Blockchain

Although most people think of [blockchain technology](https://www.simplilearn.com/tutorials/blockchain-tutorial/blockchain-technology) in relation to cryptocurrencies such as Bitcoin, blockchain offers security that is useful in many other ways. In the simplest of terms, blockchain can be described as data you can only add to, not take away from or change. Hence the term “chain” because you’re making a chain of data. Not being able to change the previous blocks is what makes it so secure. In addition, blockchains are consensus-driven, so no one entity can take control of the data. With blockchain, you don’t need a trusted third-party to oversee or validate transactions.

[Several industries](https://www.simplilearn.com/promising-uses-of-blockchain-article) are involving and implementing blockchain, and as the use of blockchain technology increases, so too does the demand for skilled professionals. From a birds eye view, a [blockchain developer](https://www.simplilearn.com/tutorials/blockchain-tutorial/how-to-become-a-blockchain-developer) specializes in developing and implementing architecture and solutions using blockchain technology. The average yearly salary of a blockchain developer is [₹469K](https://www.glassdoor.co.in/Salaries/india-blockchain-developer-salary-SRCH_IL.0,5_IN115_KO6,26.htm).

If you are intrigued by [Blockchain and its applications](https://www.simplilearn.com/promising-uses-of-blockchain-article) and want to make your career in this trending technology, then this is the right time to start. To get into Blockchain, you need to have hands-on experience of [programming languages](https://www.simplilearn.com/best-programming-languages-start-learning-today-article), the fundamentals of OOPS, flat and relational databases, data structures, web app development, and networking.

Mastering blockchain can help you scale up in a variety of fields and industries:

* Risk Analyst
* Tech Architect
* Crypto Community Manager
* Front End Engineer

7. Internet of Things (IoT)

Another promising new technology trend is IoT. Many “things” are now being built with WiFi connectivity, meaning they can be connected to the Internet—and to each other. Hence, the Internet of Things, or IoT. The [Internet of Things](https://www.simplilearn.com/what-is-iot-how-and-why-it-matters-article) is the future, and has already enabled devices, home appliances, cars and much more to be connected to and exchange data over the Internet.

As consumers, we’re already using and benefitting from IoT. We can lock our doors remotely if we forget to when we leave for work and preheat our ovens on our way home from work, all while tracking our fitness on our Fitbits. However, [businesses](https://www.simplilearn.com/ways-businesses-use-iot-article)also have much to gain now and in the near future. The IoT can enable better safety, efficiency and decision-making for businesses as data is collected and analyzed. It can enable predictive maintenance, speed up medical care, improve customer service, and offer benefits we haven’t even imagined yet.

And we’re only in the beginning stages of this new technology trend: Forecasts suggest that by 2030 around [50 billion](https://www.statista.com/statistics/802690/worldwide-connected-devices-by-access-technology/)of these IoT devices will be in use around the world, creating a massive web of interconnected devices spanning everything from smartphones to kitchen appliances. The global spending on the Internet of Things (IoT) is forecast to reach [1.1 trillion U.S. dollars in 2022.](https://www.statista.com/statistics/668996/worldwide-expenditures-for-the-internet-of-things/) New technologies such as 5G is expected to drive market growth in the coming years.

And if you wish to step foot in this trending technology, you will have to learn about Information security, [AI and machine learning fundamentals](https://www.simplilearn.com/skillup-free-online-courses#AI-&-Machine-Learning), networking, hardware interfacing, [data analytics](https://www.simplilearn.com/learn-data-analytics-for-beginners-skillup), automation, understanding of embedded systems, and must have device and design knowledge.

8. 5G

The next technology trend that follows the IoT is 5G. Where 3G and 4G technologies have enabled us to browse the internet, use data driven services, increased bandwidths for streaming on Spotify or YouTube and so much more, 5G services are expected to revolutionize our lives. by enabling services that rely on advanced technologies like AR and VR, alongside cloud based gaming services like Google Stadia, NVidia GeForce Now and much more. It is expected to be used in factories, HD cameras that help improve safety and traffic management, smart grid control and smart retail too.

Just about every telecom company like Verizon, Tmobile, Apple, Nokia Corp, QualComm, are now working on creating 5G applications. 5G services are expected to launch worldwide in 2021 with more than 50 operators offering services in about [30 countries by the end of 2021](https://5gobservatory.eu/market-developments/5g-services/), making it a new technology trend you must watch out for, and also save a spot in.

9. Cyber Security

[Cyber security](https://www.simplilearn.com/tutorials/cyber-security-tutorial/what-is-cyber-security) might not seem like trending technology, given that it has been around for a while, but it is evolving just as other technologies are. That’s in part because threats are constantly new. The malevolent hackers who are trying to illegally access data are not going to give up any time soon, and they will continue to find ways to get through even the toughest security measures. It’s also in part because new technology is being adapted to enhance security. As long as we have hackers, [cybersecurity](https://www.simplilearn.com/tutorials/cyber-security-tutorial) will remain a trending technology because it will constantly evolve to defend against those hackers.

As proof of the strong need for cybersecurity professionals, the number of cybersecurity jobs is[growing three times faster than other tech jobs](https://image-store.slidesharecdn.com/be4eaf1a-eea6-4b97-b36e-b62dfc8dcbae-original.jpeg). Also, the need for proper cybersecurity is so high that by 2021, [$6 trillion](https://www.iiba.org/iiba-analyst-catalyst-blogs/$6-trillion-is-expected-to-be-spent-globally-on-cybersecurity-by-2021/) will be spent globally on cybersecurity.

You must note that however challenging the[field](https://www.simplilearn.com/update-your-it-career-with-a-move-into-cyber-security-article) is it also offers lucrative [six-figure incomes](https://www.simplilearn.com/top-it-security-jobs-article), and roles can range from

* Ethical Hacker
* Malware Analyst
* Security Engineer
* Chief Security Officer

offering a promising career path for someone who wants to get into and stick with this evergreen trending technology.