Emerging Technologies for a Secured Future

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Technology today is evolving at such an exponential pace that annual predictions of trends seem out-of-date before they even go live. The rate of change of technology is too fast but technology-based careers don't change at that same speed rather they do evolve, and a real career conscious IT professional recognizes that his or her role will not be the same. To survive in IT industry today the employees need to be constantly learning newer dimensions, out of necessity if not desire.

So if one wants to make a career in IT industry, he or she must stay updated with current technology and trends. To be successful all you need is to have an extensive skill set and be future ready. The following eight emerging technologies are the future trends and it's the time to train yourself now for one of these emerging jobs.

1. Artificial Intelligence (AI)

Artificial Intelligence has made a great impact on our lives and still a lot of work is being done in this field. AI refers to computers systems built to imitate human intelligence and perform tasks such as recognition of images, speech or patterns, and decision making. We all are using a number of AI apps including navigation apps, streaming services, smartphone personal assistants, ride-sharing apps, home personal assistants, and smart home devices. In addition to consumer use, AI is used to schedule trains, assess business risk, predict maintenance, and improve energy efficiency, among many other money-saving tasks. Jobs in AI are in the area of development, programming, testing, support, and maintenance etc.

2. Machine Learning

Machine Learning is a subset of AI. With Machine Learning, computers are programmed to learn to do something they are not programmed to do: They literally learn by discovering patterns and insights from data. Machine Learning is rapidly being deployed in all kinds of industries, creating a huge demand for skilled professionals. Machine Learning applications are used for data analytics, data mining and pattern recognition. On the consumer end, Machine Learning powers web search results, real-time ads, and network intrusion detection, to name only a few of the many tasks it can do. In addition to completing countless tasks on our behalf, it is generating jobs. Machine Learning jobs include engineers, developers, researchers, and data scientists.

3. Robotic Process Automation(RPA)

Robotic Process Automation, or RPA, is also a 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. The activities that can be automated, include the work of financial managers, doctors, and CEOs. RPA is creating many new jobs while altering existing jobs. McKinsey finds that less than 5 percent of occupations can be totally automated, but about 60 percent can be partially automated. RPA offers plenty of career opportunities, including developer, project manager, business analyst, solution architect, and consultant.

4. Blockchain

We all think of blockchain technology in relation to cryptocurrencies such as Bitcoin but actually blockchain offers security that is useful in many other ways. 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. Moreover, no single entity can take control of the data. With blockchain, you don't need a trusted third-party to oversee or validate transactions. Blockchain technology has increased the demand for highly skilled professionals. A blockchain developer specializes in developing and implementing architecture and solutions using blockchain technology. Employers are also looking for software engineers, consultants and project managers in the field of this technology.

5. Edge Computing

As the quantity of data we're dealing with continues to increase, we've realized the shortcomings of cloud computing in some situations. Edge computing 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 data center for processing. 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 the Internet of Things (IoT) devices increases.

6. Virtual Reality and Augmented Reality

Virtual Reality (VR) immerses the user in an environment while Augment Reality (AR) enhances their environment. VR has primarily been used for gaming but now, it has also been used for training, as with VirtualShip, a simulation software used to train U.S. Navy, Army and Coast Guard ship captains. Both 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.

7. Cyber Security

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. So cybersecurity technology will always be there as an emerging technology adapted to enhance security. The various roles in this technology are can range from the ethical hacker to security engineer to Chief Security Officer.

8. Internet of Things

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. IoT enables devices, home appliances, cars and much more to be connected to and exchange data over the Internet. We are 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 and tracking our fitness on our Fitbits. Businesses 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 etc.

Although technologies are emerging and evolving all around us, these eight domains offer promising career potential. And there is a great shortage of skilled workers in all these technologies, which means it is the right time for you to choose one, get trained, and get on board at the early stages of the technology and have a great future ahead.