

Industrial 4.0: Past, Present, Future

Introduction

An Industrial Talk by Telekom Malaysia Berhad (TM) entitled Industrial 4.0: Past, Present, Future was held on 24th November. It was held at Facebook Live from 10.00 a.m. until 12.00 p.m. The speaker is Mr Redzuan Shah Yussoff, the Director of Southern Strategic Economic Region of Telekom Malaysia. The moderator is Mr. Nik Kamal Izuddin bin Nik Ibrahim, the Head of Section of Division of Digital Architecture of UTMDigital. The talk was to let us understand more about the 4th Industrial Revolution. Mr Shah Redzuan Yussoff has talked about the 1st Industrial Revolution, which uses mechanical power derived from steam engine. He also has talked about the 2nd Industrial Revolution which was the birth of electricity. It was the start of mass production of materials, the emergence of factories with assembly lines. He has shared about the 3rd Industrial Revolution. It was the era of computing. It was the birth of first IC, first microcontroller. It was also called the Digital Revolution. He has stated that the 4th Industrial Revolution is the birth of Artificial Intelligence.

Relevant IT Career

There are some careers related to the industry 4.0. First of all, machine learning engineer. This is because, in this modern era, usage of the autonomous robot is gradually increase year by year. Autonomous robot is capable to carry out work properly and consistently without human control. Not only that, it will reduce errors during the process of work. For example, Toyota and BMW are automotive manufacturers which start to produce autonomous cars driving system. They will be able to manage the system by using camera, scanner and sensor. Next, ethical hacker is also one of anticipating career. Even though, the technology has been improved, there is still hacker undergoes attacks on the targeted person. The main point of the attack is to steal information and make money by selling it. Hence, every government needs ethical hacker to avoid their country's secret to be leak out. Lastly, cloud service specialist. Nowadays, most of the people are using cloud as a platform to store data. For instance, Android user mostly prefer to use Google drive while apple user are familiar with i-cloud. Hence, if there is any problem with this application, so we need a specialist to help us with the application process.

Content

Until now, there are 4 era that are known that change the world industrial. Firstly is 1st era, where mechanical power (Steam engine) are invented. The second industrial era which happen on 1870, where Thomas Alfa Edison invented electricity and the usage of electricity are used mass. Thirdly, industrial era (1969) where the first programming language was launched. This era lead to technology that we are known these day. Lastly, 4.0 which has current industrial era. At this time, Artificial Intelligence (AI) are created. There are 9 key component of 4.0 Industrial. They are Autonomous robot, simulation, system integration, industrial IOT, Cybersecurity, cloud, Additive manufacturing, Augmented Reality and analytics. Education on 4.0 where we adopting fully digital learning (Long Distance Learning) where the students meet their teachers online and do tasks with electronic device like smartphone and laptop. Commerce 4.0 in this era are fully online where the customers don't have to go store physically. They're only go to the shopping app and buy what they want. For example Shopee, Amazon and Lazada. According to Malaysia companies technology 2020, IOT, cybersecurity and simulation are the top 3 upgraded. Many past jobs and present jobs will be replaced by future jobs, this is because older jobs will be replaced by technology. For example on the past job are typist, computer operator, Switchboard operator. Nowadays, these jobs have know Blogger, Zumba teacher, Mobile App Designer, Cloud Service Specialist, Wind turbin Technician. In the future, 3D printing technician, urban agriculturist, computer vision engineer hopefully will be available. In order to develop fully autonomous city, Malaysia now Invented Digital Infrastructure like Data Centre that are placed mainly in Iskandar Putri, Cloud Service (TM Cloud, SAP HANA, Azure Stack, etc.), IOT which are CCTV, traffic light, smart home, electric car, and many others into one system.



Summary

On 24th November, an Industrial Talk by Telekom Malaysia Berhad :tm: was held at Facebook Live from 10.00 a.m. until 12.00 p.m. The speaker was Mr Redzuan Shah Yussoff, the Director of Southern Strategic Economic Region of Telekom Malaysia. The speaker has said that there are 9 components of the fourth industrial revolution, which are autonomous robots, simulation, system integration, industrial Internet of Things, cybersecurity, cloud, additive manufacturing, augmented reality and big data and analytics. Autonomous robots are robots that are able to perform tasks without explicit human control. Cloud computing are used to replace hard storage. Internet of Things is the system to use 1 device to control multiple devices. Augmented Reality is to capture a 3D picture on video into real time process. Big data is used to make good decisions. Moreover, according to Malaysia's technology companies, top 3 jobs are Internet of Things, cybersecurity and simulation. Machine learning engineer is one of the careers related to Industry 4.0 because the usage of autonomous robots increases every year. Secondly, ethical hacker is trending to prevent hackers' attacks. Thirdly, cloud service specialist is needed to solve any problem with cloud service.

Reflection

Innovation helps to create more jobs, such as Internet of Things, Cybersecurity, Simulation and so on. This motivates me to study harder as a Networking and Computer Security student. I want to make users to be more secured when using technologies connected to the Internet. (NG DE KEN) From the talk given, I was motivated to adopt and obtain benefits of industry 4.0. Big data is crucial and help to make decision based on analytic. Tesla is an innovation vehicle which is connect to cloud and it is fully autonomous. Furthermore, the car can reach the destination itself and user can relax during the trip. (PAVUNRAJ) After listening the talk, I feel like want to deep dive my course and innovate anything more futuristic in future. I've learned and just imagining how the future is going to be while innovation nowadays so advanced and ease human workload so well such as control the smart home devices. (KABILASHWARAN) After I attend this industrial talk, my passion to a technology are increased because I want to participate in the development of Industrial 4.0 in the future. Since, I watch the talk, I know what is the component of industrial era 4.0 nowadays. (KHALIF ARBAI)