# Industrial Talk 4.0
Past, Present, Future

Speaker, Redzuan Shah Bin Yussoff (director of TM). Moderator, Nik Kamal (head of DDA in UTMDigital).
Digital Services Department (UTMDigital), Universiti Teknologi Malaysia.

Abstract

Industrial talk is an activity that UTM used to conduct every semester to help students to visualize the real world working fields in computing. It is very important for UTM students to attend this talk because, it will help them in the present time and surely in the future.

This industrial talk will give us information about many topics such as, cloud computing, augmented and virtual realty, E-commerce, Internet of Things (IoT), and so on.

We will talk extensively about these topics in the following sections.

Introduction

As an introduction we can say that, this industrial talk was held to let the students be involved in the industry sector faster than ever before. This meeting was held on the 24th of November, 2020. Due to Covid-19 pandemic the faculty established this meeting online using Webex meeting and Facebook live.

As Dr. Redzuan said, we need to understand the past to appreciate the present and change our life in the future. Actually, this phrase is very true and accurate because, without learning from our past we will not achieve any thing in the future.

In our journey during this session we did understand about many topics in our learning field for example, Industry revolutions, Cloud computing, Internet of Things (IoT), Augment-ed reality (AI), Data analysis, E-Commerce, Future jobs, and network solutions in Malaysia.
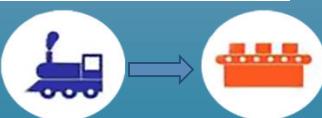
Details of journey Industrial 4.0

Over the decades, developments in Information and Communication Technologies (ICTs) under the industry 3.0 and 4.0, have brought about a radical transformation in the world in which we live. The impact that the emerging technologies have, is comparable to that of the advent of mechanization and electricity during industrial revolutions 1.0 and 2.0. As such, Dr. Redzuan have discussed various aspects of this evolution. In fact, even though he focused on the industry 3.0 and 4.0 as they shape our current world, he also covered some parts of the industry 1.0 and 2.0, and stated that first revolution was marked by a shift from manual production to manufacturing using machines mainly powered by steam and water, whereas the second brought about improvements in the means of communication and transport and hence major rail networks were built, and communication accelerated further thanks to the development of the telegram.

Way Forward and tech trends:

For industry 3.0 and 4.0 Dr. Redzuan provided much more detail and discussed numerous technologies, starting from *cloud computing* which enabled companies to buy IT resources as a service, much like electricity is consumed, instead of having to build and maintain IT infrastructure in-house.

He also discussed the *internet of things (IOT)* and how it empowered industries to monitor machines remotely, do predictive maintenance of equipment and produce new services based on the billions of pieces of *data* generated by the connected objects.
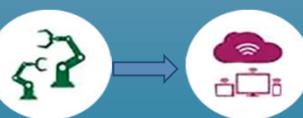
One of the interesting topics that the presenter introduced is *augmented reality* which is a technology that allows the assimilation of virtual 3D elements into a real environment and give the illusion of perfect integration to the user, especially when it extensively incorporates *artificial intelligence AI*, which proves to be one of the main symbols of the 4.0 industrial revolution. *E-Commerce* or Commerce 4.0 is not only related to purchasing online but also related to study customers' behavior, needs, religions, and ideologies to be consistent with their thoughts.

Future jobs based on modern technologies that continue extending like 3D print & 3D printing technician as a future job, network security & ethical hacker, and AR / VR & machine learning engineer.
TM *5G* smart city solutions in this phase, Mr. Redsuan mention smart tourism services and Langkawi island as an instance because it is the first digital & smart tourism island in the world. Malaysian government demands and efforts to implement smart city and smart agriculture in Malaysia.

Conclusion

As a group, we did understand many things about the latest technology fields in many aspects. Actually, we did enjoy the online talk pretty much because, it improved our understanding and enhanced us to visualize the importance of technology in the industry sector.

Dr. Redzuan gave us too many information about cloud computing, (IOT), 5G Technology, and so on as mentioned before.

We think that it is very useful to do more talk like this one because students like us can achieve and collect a lot of information and experience in a short period of time.

Finally, we can say that we learned a huge amount of information and we can see how this information will help us to invent and found solutions to develop the world in the future.

References

Clipart and images from:
https://www.klipartz.com/en
https://www.pngegg.com/

Osama's Reflection:

Industrial revolutions and Smart cities are the most motivating concepts that pushed me toward the future with high expectations for humankind's life, they helped me to choose my place in the future.

Ahmedalla's Reflection:

The developing technologies and new ideas in this field are what motivates me to keep up the good work trying to make our life as humans easier and more efficient. This talk helped me understand the importance of tech in our life in the present and surely in the future.

Oussama's Reflection:

The industrial talk has truly enlightened me in many different ways, as it opened my eyes to the fact that we are living in an era of change ; an era that will completely reshape the world we live in when the industry 4.0 takes over the industry 3.0. And as a software engineering student, I'm eager to participate in that change in the best possible way.

Acknowledgements

Smart City
Smart Economy
Smart People
IoT

Group members: Ahmedalla Hanoura | Abdellah Oussama | Osama Abdelhameed
A19EC4045   A19EC4041   A19EC4055