Petronas

17 November, 2023

NEWSLETTER

Business Company

SUMMARY

On November 17, 2023, first-year data engineering students visited the Petronas office (Menara ExxonMobil) to gain insights into future market trends. We were lucky to have 2 speakers, Sir N inderjit Singh (Head of Infra Service) and Sir Roman Kvaska (Head of Software Engineering and Testing), shared valuable information.

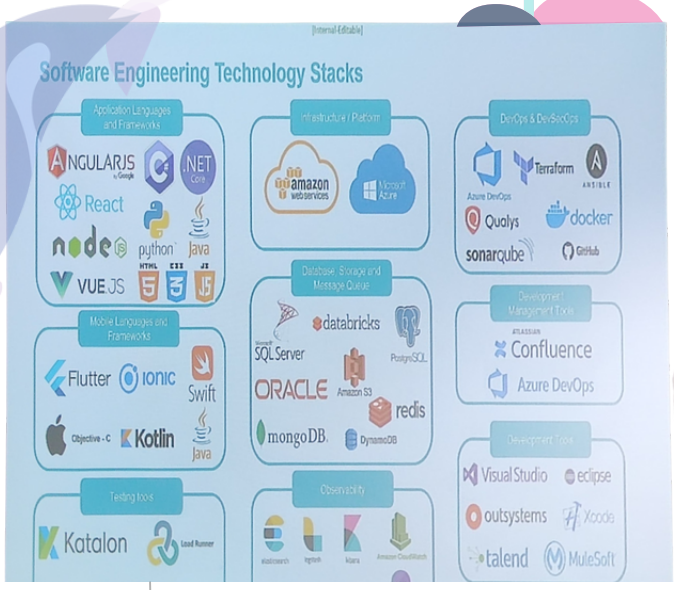
Sir Ninderjit Singh discussed Petronas' work in IT infrastructure services, highlighting their role in revolutionizing O&G with 5G technology. He also touched upon Cloud Innovation and IT Service Management (ITSM).

In the second section, Sir Roman Kvaska, as a software engineer, emphasized the skills required in the field and presented data indicating a 22% increase in demand for future IT jobs from 2020 to 2030.

The session concluded with a Q&A, enhancing students' understanding. The visit provided valuable knowledge and inspired students to contribute to progress, aligning with Petronas' tagline, "Terus Memacu Kemajuan" (Continuously Driving Progress).

TECHNOLOGIES DISCUSSED

First and Foremost, one of the technologies discussed was the robotics that were being utilized by the crew of the Petronas Team. They briefly touched on their Unmanned Ground/Aerial Vehicle(UGV) which is mostly used for equipment inspection utilized at rugged terrain. Other than that, we were introduced to some wearables such as the Smart Glass that are equipped with data analysis and accessibility for frontliner to execute their daily tasks safely. Moreover, the Digital Twin & IoT was also presented to us which are virtual assets that provide predictive and prescriptive functionalities . IoT which stands for Internets of Things, is utilized for connectivity and process automation, visuals and surveillance. Last but not least, they also introduced us to cloud computing as a new way of navigating an accelerated journey to the summit of cloud innovation. Cloud computing is the use of computing power that is located elsewhere in 'the cloud' of remote networks and it can can be categorized to 3 types which is private, public and hybrid.



ISSUES DISCUSSED

NAVIGATING ACCELERATED **CLOUD INNOVATION**

- *Cloud Computing Types: Public, private, and hybrid clouds.*
- *Computing Power in Remote Networks: Utilizing resources located in "the cloud."*

REVOLUTIONIZING O&G INDUSTRY WITH **5G**

- *MFT 50:30 Support: Seamless 5G connectivity for harmonizing with other technologies.*
- *MFT0 Alignment: Digitization and 5G aid in reducing carbon emissions and promoting sustainability.*

EMBARKING IN IT MODERNIZATION WITH **ITSM**

- *Enhancing Products: ITSM contributes to the improvement of products and services.*
- *ITSM Components: Service strategy, reports & dashboard, continual service improvement.*

Reflection-Petronas

To sum it all up, this industrial visit has not only let us get a glimpse of the astonishing world of the productive minds of the software engineers but also widened our levels of understanding in technologies and strategies utilized by the PETRONAS team. As every part of the world's technology keeps progressing, new procedures are required to be implemented in daily tasks for effectiveness, especially in the software department. This drastic change in advanced technology leads to a more competitive environment to secure a job in software departments as the skills necessary must be mastered flawlessly such as analytical skills and life-long learning which was mentioned by the Head of software engineering and testing at PETRONAS Digital, Sir Roman Kvaska. In the intermediate future, software engineering will be expanded to the field of cloud computing and big data as one of its fastest-paced and innovative nature.The visit underscored the paramount lesson for IT developers: a commitment to **lifelong learning** is essential to stay abreast of the ever-evolving world.

Visit-Huawei,CSIC,KL

Sep 11,2023 10am

Business Company

Summaries

On September 17, 2023, UTM's SECPH (Data Engineering) students visited the Huawei Customer Solution Innovation Centre (CSIC) in Kuala Lumpur, arriving at 11:30 am, slightly behind the 11 am schedule. The visit included a photography session and a division into two groups for a detailed briefing on Huawei's products. Students gained insights into the industry's work environment, observed management efforts, and explored Huawei's technological operations. One group focused on Huawei's infrastructure, while the other delved into Smart Devices like the Fusion Module and high-end storage systems. The visit aimed to gather information about Huawei's internship programs and enhance understanding of both Huawei and our country's technology development stage, aligning with Huawei's mission for a fully connected, intelligent world.

The technologies discussed

1. **Data Center:**
   - Capable of storing vast amounts of data simultaneously.
   - Equipped with a panel to detect faulty systems and an AI Security System.
   - Features an auto-ventilation system that activates when server heat becomes high.

2. **Fibre to the Room:**
   - Offers wired connections reaching every corner of the house.
   - Connection of wires by using micro optical cable which is not easily break
   - Provides a robust network connection throughout the entire residence.

3. **AI Detection for Grocery:**
   - Utilizes AI to weigh products, instantly determining their quality and total cost.
   - Enhances the overall shopping experience through efficient and accurate information.

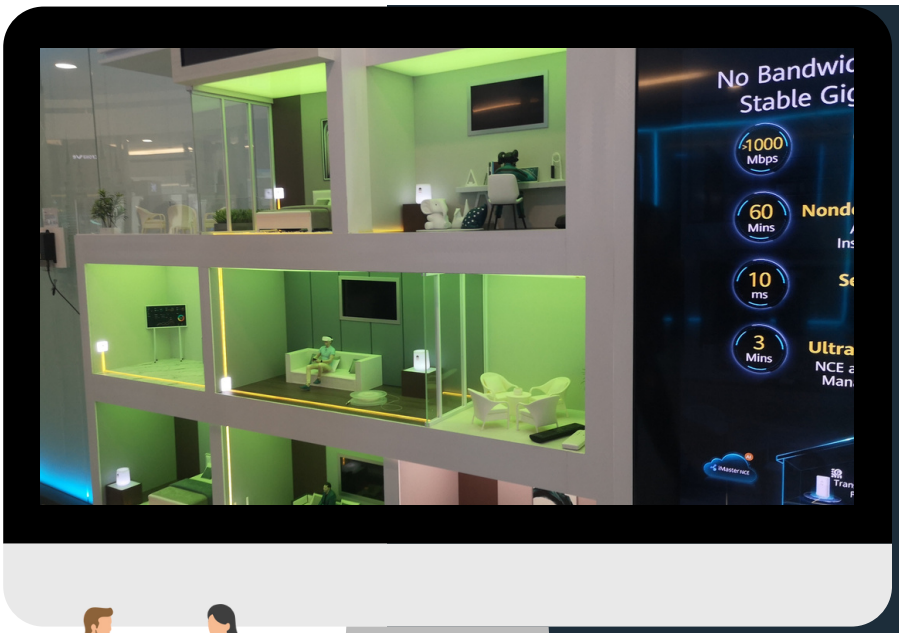
Data Center

4. TV-sized Touch Screen:
   - Functions as a large touch screen similar to an iPad but in TV size.
   - Allows direct editing and access to documents.
   - Ideal for classroom tutoring, offering a dynamic and interactive teaching tool.

The issues discussed

Network generations have evolved from 4G to 5G. 5G is the next generation for 4G in wireless connection. The difference between 5G and 4G is that 5G utilizes a wider frequency range, and has higher speed with lower latency compared with 4G. Other than that, according to the employee of Huawei, they have invented the 6G network, which is more advanced than 5G and is being tested in China. In the future, the network will be used worldwide.

The 5G network has provided the users with many benefits. Firstly, it allowed users to download or send documents with much greater speed without any delay. Besides that, the network is also able to reduce the cost of buying cables to connect the networks to other devices, instead users can connect it using wireless connection such as bluetooth and Wi-Fi. Last but not least, it is also eco-friendly by reducing the production of internet cables.



Reflection-Huawei

The Huawei CSIC industry visit by UTM's Faculty of Computing provided invaluable opportunities for first-year data engineering students to explore cutting-edge technologies beyond their curriculum. Insights gained during the visit deepened understanding of ICT, inspiring future careers. Emphasizing the importance of staying abreast of technological advancements, the focus on cloud computing and collaboration with Telekom Malaysia Bhd highlighted Malaysia's tech progress. The transformative impact of technology on society was evident, motivating aspiring data engineers to contribute to Malaysia's tech landscape, prioritizing design, accessibility, and disaster-proofing. Exposure to 5G innovation and IoT capabilities further fueled aspirations, with gratitude to companies supporting fresh graduates for seamless integration into Malaysia's tech advancements.

Bringing digital to every person, home and organization for a fully connected, intelligent world.