



**SECP 1013**  
**TECHNOLOGY AND INFORMATION SYSTEM**  
**SEMESTER I (2023/2024)**

**ASSIGNMENT 3:**  
**ACADEMIC REPORT OF INDUSTRY TALK 2**  
**ON SYSTEM DEVELOPMENT**



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Credence was launched on 6th July 2022. Credence is a cloud and digital services company founded under Telekom Malaysia Berhad (TM). Credence not only provides cloud advisory but also provides full end-to-end solutions from infrastructure to insights. Credence has partnered up with Amazon Web Services (AWS), Huawei and VMware to enable broad options for its customers, providing tailored services according to their needs. Credence uses multiple technologies. For example, Credence uses ClickHouse and PostgreSQL for their database and uses Python and SQL as their programming languages. Other than that, Credence uses PowerBI and Metabase as their visualization tools.

### **Skills Required to be Data Engineer**

#### **1. Python Language**

Proficiency in Python language is a necessary ability for anyone aspiring to work as a data engineer. Data engineer utilises the object oriented and scripting python programming language to create data pipeline which is used in data engineering jobs.

#### **2. SQL**

One of the most crucial abilities was found to be SQL. SQL is a type of programming language created to make database interaction easier. Based on the parameters specified in the query, a data engineer utilised SQL to extract particular data from a firm database so that it could be further examined using another computer language.

#### **3. Technical and managerial skills**

The ability to handle the storing, cleaning, and coding of data, as well as the application of appropriate mathematical and statistical techniques to create predictive and analytical models and visualise results, are examples of the skill-sets that a data engineer is required to have. Even more, managerial skills and critical thinking are required, which allows a truly understanding of the purpose of the field area they work on.

#### **4. Soft skills**

Soft skills are critical for data engineers because they enable adaptation, problem-solving as well as efficient communication. While these skills can be taught conceptually, one can only learn how to constantly put them in practice only by their own personal experience. Besides, soft skills also support productive teamwork and ethical concerns.

#### **5. Cloud computing skills**

Data engineers are in charge of managing and analysing massive amounts of raw data generated by organisations. This data is frequently hosted on cloud servers, and data engineers are responsible for ensuring its availability. Therefore, data engineers should be cloud-savvy in order to assist organisations in maximising the benefits of cloud platforms in terms of scalability, flexibility, security, and cost effectiveness.

### **Reflection**

How will you be a system developer in the next four years?

Dayang: Over the course of the next four years, I intend to interact with experienced engineers, stay informed on industry trends and refine my data engineering practical skills through practical projects and internships. Being a proficient system developer will require constant learning and technological adaptation. To succeed in the fast-paced sector of system development, I plan to utilise cloud platforms, contribute to inventive solutions and build a problem solving attitude.

Farra: I aim to become an expert in sophisticated data engineering concepts and advance my programming abilities as a data engineering student in order to be a system developer. I will ensure myself to actively pursue professional opportunities and internships that provide worthwhile knowledge and stay up to date on industry developments with an ongoing education. Furthermore, I will focus on creating a healthy professional network and cultivating my soft skills to match my technical qualities within the rapidly evolving field of data engineering.

Harini: I see myself doing internships for big companies who are established nationally and internationally in the upcoming years so that I can implement the knowledge I've gained in university and also learn more skills that are essential for a system developer to work efficiently. I also believe that building your career does not start after the end of our studies but starts way before such as when we are doing internships. Therefore, looking for a company with a healthy work environment and a company that offers you useful knowledge and experience is very important.

Dania: As the world is rapidly evolving with advanced technologies, I understand the importance of adaptability. The ever-evolving tech landscape requires continuous learning in order to stay relevant in the industry. I planned to keep myself being updated with the latest developments in software development, programming languages, frameworks, and industry trends. I will also build connections with people that are well experienced in this industry so that I can learn on a more broad spectrum while also sharpening my soft skills as it is also in order to become a successful system developer.

## References

- Li, G., Yuan, C., Kamarthi, S., Moghaddam, M. and Jin, X., 2021. Data science skills and domain knowledge requirements in the manufacturing industry: A gap analysis. *Journal of Manufacturing Systems*, 60, pp.692-706.
- Lin, J., Yu, H., Pan, Z., Shen, Z. and Cui, L., 2018. Towards data-driven software engineering skills assessment. *International Journal of Crowd Science*, 2(2), pp.123-135.
- Mason, R.T., 2018, May. Changing paradigms of technical skills for data engineers. In *In SITE 2018: Informing Science+ IT Education Conferences: La Verne California* (p. 903).
- Mikalef, P., Giannakos, M.N., Pappas, I.O. and Krogstie, J., 2018, April. The human side of big data: Understanding the skills of the data scientist in education and industry. In *2018 IEEE global engineering education conference (EDUCON)* (pp. 503-512). IEEE.
- Srinivas, A., , Varma A.V.R.K., 2013, July. International Journal of Innovative Research in Computer and Communication Engineering *A study on cloud computing and data mining*. pp.1234
- Telekom Malaysia, 2022, 6th July. Credence, <sup>TM</sup>'s New Cloud And Digital Services Company, To Empower Enterprises' Digital Capabilities - From Infrastructure to Insights