Collaborative Learning Discussion 1

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Breakdown of project:

Discuss your views on the topic using the articles below:

https://hdsr.mitpress.mit.edu/pub/koyzu1te/release/1

https://www.europeanscientist.com/en/features/the-challenges-of-the-convergence-of-data-ai-cloud-blockchain-iot-and-cybersecurity/

Industry experts claim there would be a convergence of data science, Artificial Intelligence, and Cybersecurity in the next decade. Data would be the primary nucleus and engine for this evolution and paradigm shift. Using published sources discuss the implications of this evolution and paradigm shift, emerging trend, and school of thought by analysing and evaluating the opportunities, challenges and limitations of such a future development. Your analysis and evaluation should include:

- The emergence of data science as a subject area.
- Data as the main driver and engine for data science, Artificial Intelligence and Cybersecurity.
- Highlight the opportunities, limitations, and challenges.

You should demonstrate that you understand the topic covered and ensure you use references to academic literature (journals, books, reports, etc.). This is activity will provide evidence of your personal growth.

Guidelines for discussion responses

Week 1:

The discussion will last for 3 weeks.

Your initial posting should respond to the question and be at least 200 words long.

The initial post should be labelled 'Initial Post'.

Week 3:

In week 3, provide a summary of the discussion based on your initial post, the feedback from your peers and the content of all 3 units. This should also include your views on Master Data Management (see Unit 3).

Agree or otherwise, with reasons, with the contributions and reviews made by other students on the topic under discussion, enhancing your original post. This should be 300 words (excluding references). This summary post accounts for 10% of your final module score.

My work:

Initial post:

Data Science comes to mind when talking about artificial intelligence (AI). Hence when in articles published by Hero et al. (2023), the discussion of future improvements to cybersecurity needing to invest in data-driven approaches using AI, Data science emerges into the conversation. With industries like cybersecurity having a direct effect on majority of us, some have brought up the importance of teaching ethics during the practice of Data science, as discussed in Bezuidenhout & Ratti, 2021. Like the many reports on AI projects having bias towards particular groups in articles published by Baumer, 2022. Extra care may need to be taken during the convergence of Data science, AI and cybersecurity. That responsibility falls onto the Data scientists working on the convergence projects.

Without data, Data science may be limited. In articles published by Teboul, (2021), Data is the essential condition for the building blocks of AI. Without data, the convergence with cybersecurity may not be possible. Data may be key, but work needs to be done on data. Data needs to be cleaned, stored and readily available for use. As described in articles published by Teboul, (2021), data is like the blood that flows through the human body. I like to agree and think that just as blood cannot be dirty or miss any organs. Data needs to be processed before it can be used to improve projects.

If done correctly, the opportunity to improve using convergence is possible. Discussed in the articles published by Hero et al. (2023), the opportunity to improve convergence using Machine learning (ML) techniques is becoming a popular theme. This will not come with limitations and challenges, many mentioned above, but in the articles published by Hero et al. (2023), one of the challenges are, retrieving data that are considered to be anomalies.

References

Hero, A., Kar S., Moura J., Neil, J., Poor H., Turcotte, M, & Xi, B. (2023) Statistics and Data Science for Cybersecurity. https://hdsr.mitpress.mit.edu/pub/koyzu1te/release/1 [Accessed 02 February 2023]

Bezuidenhout, L, & Ratti, E. (2020) What does it mean to embed ethics in data science? An integrative approach based on microethics and virtues. https://link.springer.com/article/10.1007/s00146-020-01112-w [Accessed 02 February 2023]

Baumer. B., Garcia, R., Kim, A., Kinnaird, K, & Ott, M. (2022) https://www.tandfonline.com/doi/full/10.1080/26939169.2022.2038041 [Accessed 02 February 2023]

Teboul, B. (2021) https://www.europeanscientist.com/en/features/the-challenges-of-the-convergence-of-data-ai-cloud-blockchain-iot-and-cybersecurity/ [Accessed 02 February 2023]

Final post:

I have received one review on my initial post as of 13 February 2024. The contribution was made by Dinh, a fellow postgraduate student at the University of Essex Online. I fully agree with his review, where I provide a detailed exploration of the question asked, where I can improve in terms of my deeper understanding and providing ways to improve the convergence in the post.

Though I agree, I believe word count plays a major role in limiting the depth I was able to go into. Nonetheless, I agree my initial post provided a detailed exploration. I attempted to answer all questions while providing multiple sources. This way the exploration has multiple angles of exploration promoting not only a deeper dive but also a dive that many more readers could relate too. I also agree I could have improved my initial post by emphasising on the way of improving more and giving more of my opinion to the research I found. By doing so, the reader will not only be able to see my understanding of the initial post but also have an easier time to comprehend the mammoth of information being provided.

Onto my views on Master Data Management (MDM), attempting to show my growth from the feedback. MDM is described as a solution to assist businesses in knowing the expectations of storage, usage and quality of all data within a business. (Profisee, 2023) The improvements a company can achieve includes but not limited to enhanced data-driven decisions and greater trust in data analysis. (Tobiloba et al., 2023) Though it may not be easy for larger businesses to implement MDM (Profisee, 2023), my view is that MDM should be one of the highest priorities for all businesses. As Majority of businesses require some sort of data management.

(299 words)

Profisee. (2023) Master Data Management: What, Why, How & who. Available from: https://profisee.com/master-data-management-what-why-how-who/#tab3 [Accessed 13 February 2024].

Tobiloba, B., Kelvin, L., Kelvin, K. (2023) Master Data Management: A Cornerstone of Efficiency and Innovation in the Agtech and Manufacturing Industries. Available from: https://osf.io/preprints/osf/8vh2e [Accessed 13 February 2024].