Data Science: Definition, Applications, and Report Structure

Based on the videos and the reading material, how would you define a data scientist and data science? (3 marks)

Data Scientist: Data Scientist uses data to find solutions to problems and tells stories to communicate their findings. Data Scientist is someone who finds solution to a problem through analyzing and interpreting data using various techniques and tools. They use their analytical skills to extract valuable insights and employ storytelling to convey their insights to various stakeholders. They are able to uncover valuable information that can drive informed decision-making for organizations.

Data Science: Data Science is the study of large quantities of data, which can reveal insights that guide organizations in making strategic choices. It involves mathematics, data visualizations, statistical analysis, machine learning and more. Data Science is something that Data Scientists do.

As discussed in the videos and the reading material, data science can be applied to problems across different industries. Give a brief explanation describing what industry you are passionate about and would like to pursue a data science career in? (2 marks)

Data science is useful for solving problems in various industries. I am passionate about pursuing a data science career in pharmaceutical industry, as pharmaceutical data science directly contributes to the development of life-saving medications and therapies. The integration of data science would expedite the drug development process, enabling faster delivery of safer and more effective medications to patients in need. For instance, through the analysis of vast datasets containing molecular structures, biological interactions, and historical drug performance, data scientists can develop predictive models to pinpoint molecules with a higher likelihood of success. Being part of this field means I can contribute to improving the quality of healthcare and potentially saving lives.

Based on the videos and the reading material, what are the ten main components of a report that would be delivered at the end of a data science project? (5 marks)

The main components of a report that would be delivered at the end of a data science project are:
1. Cover page
2. Table of contents
3. Executive Summary
4. Introductory section
5. Methodology section
6. Results section
7. Discussion section
8. Conclusion section
9. References
10. Acknowledgment