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D596 – The Data Analytics Journey
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Task 2

A. Create a career plan.

Over the next 3 years, while I work on my master's degree, I plan to continue my career track as a business intelligence analyst from an analyst I to an analyst II while also developing my SQL, PowerBI, and Python skills. Once I finish my degree, I intend to pivot into a data engineer role to leverage my degree and my background in healthcare data.

1. Describe three different roles or careers in data analytics.

- Business Intelligence Analyst: A BI Analyst focuses on transforming data into actionable insights that support business decision-making. They use tools like Power BI or Tableau to create dashboards and reports, identify trends, and help stakeholders understand performance metrics.
- Data Engineer: A Data Engineer designs, builds and maintains the systems that allow data to be collected, stored, and accessed efficiently. They work with big data technologies, databases, and pipelines to ensure data is clean, reliable, and available for analysis.
- Data Scientist: A Data Scientist uses advanced analytics, statistics, and machine learning to uncover patterns and predict future outcomes. They often build models, run experiments, and provide data-driven recommendations for complex problems.

a. Discuss the differences between the roles or careers from part A1.

While Business Intelligence Analysts, Data Engineers, and Data Scientists work with data, their roles differ in focus and skillset. BI Analysts primarily turn data into clear, actionable insights through reports and dashboards, supporting everyday business decisions. Data Engineers focus on the backend—building and maintaining the infrastructure and pipelines that make data accessible and reliable. In contrast, Data Scientists use advanced statistical methods and machine learning to analyze large datasets and make predictions, often tackling more complex problems.

2. Describe how each role from part A1 supports the data analytics life cycle.

Each role plays a vital part in the data analytics lifecycle. In the early stages of the lifecycle, data engineers are fundamental in the data acquisition and cleaning stages by collecting, transforming, and organizing data, ensuring it's accessible and ready for analysis. Business intelligence analysts contribute by using tools to visualize data, generate insights, and communicate findings to stakeholders during the reporting and visualization phase. Data scientists often work across multiple

stages to uncover deeper trends and relationships: data exploration, predictive modeling, and data mining. Together, they ensure that raw data is transformed into valuable insights that drive informed decision-making.

B. Compare three different data analytics disciplines as described by ProjectPro.

- Data engineering is all about designing and implementing data architectures, including databases and large-scale data processing systems (ProjectPro 2024). By focusing on the infrastructure and reliability of data pipelines, data engineers can prioritize data accessibility for downstream analytics.
- Business intelligence (BI) is the collection and analysis of business data using various methods and technologies. The primary goal of BI is to give organizations meaningful information and analysis to help them make decisions (Nishtha 2024). While leveraging visualizations via dashboards and predefined metrics often, BI analysts can support operational decision-making.
- Business Analytics involves the statistical study of primarily structured business data and aims to provide solutions to specific problems or roadblocks the business faces (ProjectPro 2024). Like BI analysts, business analysts utilize statistical methods to leverage predictive analytics and address business decision-making.

1. Identify three types of careers from the Bureau of Labor and Statistics government data in your career plan.

- Computer and Information Research Scientists
- Data Scientist
- Database Administrator/Architect

2. Identify your academic skills and needs for the careers considered in part B1.

- While both data scientists and database admins/architects typically require a bachelor's degree in a computer information systems field, computer/information research scientists usually face a higher barrier for entry with a master's level degree in a similar field (U.S. Bureau of Labor Statistics 2025). Additionally, professionals in these fields typically show identical qualities such as analytical thinking, detail-oriented mindsets, and the capability to communicate their findings to both technical and non-technical audiences succinctly. Regarding my skill set, I have a bachelor's degree in computer information systems and a professional background in data engineering and business intelligence analytics. I believe my skillset intersects nicely with the qualities looked for in these fields, and the additional skills I will gain through this program will help to reinforce my

technical understanding while also allowing me to acquire a more specialized insight into analytics.

C. Identify a potential career goal in your career plan based on your strengths and academic/MSDA track interests.

- Considering my background, strengths, and interests, my current career goal is to become a senior healthcare data engineer. This career would help me combine my technical expertise with data analytics and my collaborative relationship-building skills. By fostering strong relationships, I believe I can mentor more effectively and provide a better service to stakeholders and end-users.

1. Reflect on your career strengths as identified in your personalized CliftonStrengths assessment results.

- My results from the CliftonStrengths assessment interestingly aligned closely with another assessment I took recently (Ntrinsx). I resonated closely with the relationship-building and strategic thinking mindsets in both assessments. Taking a step back and reflecting on the results shows a growth-oriented mindset for me and those around me, which conflicts with my perception of myself as introverted. That being said, digging into my results made me realize that trust-based collaboration and striving to maintain harmony made sense with my perception and my aversion to conflict.

D. Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized.

Nishtha. 2024. “Business Intelligence vs Artificial Intelligence-Battle of the Brains.” ProjectPro. Iconiq Inc. October 28, 2024. https://www.projectpro.io/article/business-intelligence-vs-artificial-intelligence/788.

ProjectPro. 2024. “Data Science Compared with Different Analytics Disciplines.” ProjectPro. Iconiq Inc. October 11, 2024. https://www.projectpro.io/article/data-science-compared-with-different-analytics-disciplines/175.

U.S. Bureau of Labor Statistics. 2025. “Database Administrators and Architects: Occupational Outlook Handbook.” Bureau of Labor Statistics. U.S. Bureau of Labor

Statistics. March 14, 2025. https://www.bls.gov/ooh/computer-and-information-technology/computer-and-information-research-scientists.