**M1 - W2 Assignment: Goal Setting**

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**Foundations in Data Science and Leadership Part 1**

**Professional Masters in Data Science and Leadership**

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**Goal Setting**

* **My story of starting and strengths in data science:**

A specialist in the analysis and interpretation of data is known as a data scientist. They assist firms in improving their operations and decision-making processes by applying their data science expertise. Most data scientists have a solid foundation in computer science, statistics, and mathematics. They examine huge data sets using this knowledge to look for trends or patterns of data. Furthermore, data scientists might create novel approaches to gathering and archiving data (simplilearn, Nov 30, 2023).

Embarking on a journey into data science can significantly enhance my statistical background. I had been graduated with major statistics including mathematics and econometrics. Furthermore, I have been working long time with financial structured data which is practical application of statistical concepts.

* **The most important competencies I would like to develop:**

The significant increase in data volumes that we have witnessed over the previous years has been sustained by the recent AI revolution. Data increases our knowledge and can facilitate better commercial, government, and citizen decision-making. However, in order to transform data into meaningful information, I want to require competencies in a combination of technical, leadership development, and industry-specific knowledge (Datacamp, Nov 2023).

Proficiency in technical skills like Python, R, SQL, NoSQL, Machine Learning, Data Visualization, Big Data technologies, and Database Management is crucial. Leadership development hinges on competencies such as Project Management, Team Collaboration, Communication, and a strong foundation in Ethics & Privacy. Industry-specific expertise, encompassing Domain Knowledge and Business Acumen, further enhances one's capabilities. Balancing technical prowess with leadership skills and industry acumen forms a comprehensive skill set essential for navigating the dynamic landscape of contemporary professional environments.

* **The key learning goals over the duration of this program & beyond:**

The key learning goals of Professional Masters in Data Science and Leadership are mentioned below:

**Technical Proficiency in Data Science:**

* Mastering key concepts and techniques in statistics, machine learning, and data analysis.
* Acquiring proficiency in programming languages commonly used in data science, such as Python and R.
* Gaining expertise in working with big data technologies and tools.

**Data Management and Processing:**

* Recognizing the procedures for gathering, cleaning, and preparing data.
* Learning effective data storage, retrieval, and management strategies.
* Exploring data warehousing and database systems.

**Data Visualization and Communication:**

* Developing skills in creating compelling visualizations to communicate insights effectively.
* Learning how to present complex technical findings to non-technical stakeholders.

**Leadership and Management Skills:**

* Developing leadership and project management skills specific to data science projects.
* Understanding how to align data science initiatives with organizational goals and strategies.
* Learning to manage interdisciplinary teams and fostering collaboration among team members.

**Ethical and Legal Considerations:**

* Understanding the ethical implications of working with data and making decisions based on data.
* Familiarity with legal and regulatory frameworks related to data privacy and security.

**Business Acumen:**

* Gaining an understanding of the business context in which data science projects operate.
* Learning how to identify and prioritize business problems that can be addressed through data science.

**Problem Solving and Critical Thinking:**

* Developing strong problem-solving skills and a critical mindset when approaching data-related challenges.
* Learning to apply data-driven decision-making processes.

**Professional Development:**

* Building a professional network within the data science community.

**Continuous Learning:**

* Instilling a mindset of continuous learning to keep up with evolving technologies and methodologies in the field of data science.

The above learning goals will equip me with a well-rounded skill set, enabling them to excel both in the technical aspects of data science and in leadership roles within organizations. The combination of technical expertise and leadership skills is crucial for success in the dynamic and evolving field of data science.

* **My career goals:**

Data science is a "hot new field that promises to revolutionize industries from business to government, health care to academia," according to the New York Times. Nonetheless, there are numerous positions and tasks available within the data science field (Chatterjee, M. Nov 27, 2023).

After studying this qualification, I want to pursue the following roles:

* Chief Data Scientist and Analytics Officer
* Chief Technical Officer
* Chief Marketing Officer
* Head of Customer Insights
* Head of Digital, Data, and Technology
* Data Analyst
* Data Consultant
* Data Engineer
* Data Manager
* **The program's objectives and my goals relate to and influence one another:**

A Professional Master's in Data Science and Leadership program typically combines two key components: expertise in data science and skills in leadership. The goals of such a program are designed to integrate these elements in a way that produces professionals who are not only proficient in handling and analyzing data but also capable of leading teams and making strategic decisions.

The goals I have listed above for studying this program encompass a wide range of skills and knowledge areas. These goals are interconnected and often reinforce each other. Technical proficiency forms the foundation, which is then leveraged for effective data management, visualization, and communication. Leadership skills, ethical considerations, and business acumen further build on this foundation, while problem-solving and critical thinking are ongoing processes that draw from various aspects. Professional development and continuous learning tie everything together, ensuring that individuals in the program evolve into well-rounded professionals in data science and leadership.

* **Making an impact through data science:**

The impact of a data science and leadership program can be significant and multifaceted. Some key impacts can be- Skill development, Decision-making improvement, Innovation and problem solving, Efficiency and productivity, Strategic planning, Cross-functional collaboration, Talent Development, Competitive advantage, Ethical considerations, and Career advancement.

Overall, the impact of a data science and leadership program extends beyond individual skill development, influencing organizational dynamics, strategic decision-making, and the overall competitiveness of businesses in a data-driven world.

**References:**

Simplilearn. (Nov 30, 2023). How to Become a Data Scientist in 2024: Complete Guide. Retrieved from <https://www.simplilearn.com/tutorials/data-science-tutorial/how-to-become-a-data-scientist>

Datacamp. (Nov 2023). The Top 15 Data Scientist Skills for 2024. Retrieved from <https://www.datacamp.com/blog/top-15-data-scientist-skills>

RMIT University. (n.d.). Online Masters of Data Science Strategy and Leadership. Retrieved from <https://www.rmit.edu.au/study-with-us/levels-of-study/online/online-master-of-data-science-strategy-and-leadership>

Chatterjee, M. (Nov 27, 2023). Top 9 Job Roles in the World of Data Science for 2024. Retrieved from <https://www.mygreatlearning.com/blog/different-data-science-jobs-roles-industry/>