Reflective Journal

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I am currently doing Bachelor of Information Technology and my first major is Computer Science. For the past three years of my degree, I mainly focus on learning software development and system design. It was in my second year when I realized the importance of data analysis in the industry as I was part of software engineering team of a tech company. The process of developing new features includes not only coding but a lot of data processing and analytics beforehand. The best way to optimizing the business performance is keeping it data-centric, meaning every business decision must be supported by insights extracted from data, not just theory. Therefore, I decided my second major to be Data Science and have been learning data analysis in related with business development ever since.

I enrolled in IAB303 – Data Analytics for Business Insight with the hope of gaining knowledge about how businesses apply data analysis, exploring real business cases, and improving my technical data analysis skills. This journal describes my personal experience throughout the unit, indicates some crucial points in data analysis I have acquired, and plans out personal improvement in the future.

The first four to five weeks were dedicated to introducing the data analytics cycle and some basic programming skills. The first thing I noticed is that there is a huge difference between programming for software development and data analytics. Most of programming topics are for processing and extracting insight from data. I had a chance to learn different approaches in dealing with different forms of data such as structured data, text data, and streaming data. I had a strong programming background and found these exercises fairly easy. What really intrigued me is the concept of making sense of the data and understanding hidden insights. The results of our finding are much dependent on what questions we are trying to answer. Different people might come up with different ideas to approach the problems. For example, in Week 3 studio session example 1 – Workplace safety, the lecturer tried to target different groups of people. But when I read the business concern, my initial thinking was to analyze the extent of seriousness for each incident type. Also throughout the analysis of this problem, the lecturer continuously asking more questions as new information came up. This is something I should keep in mind to make my analysis as comprehensive as possible. Even though I enjoyed these topics as they provided fundamentals in data analysis, I felt that there should be some real business cases with relation to data analytics. This would further emphasize the importance of data analytics and help me understand the industry standards.

The first challenge came up when I started doing assignment 1 that requires me to analyze the koala occurrence dataset to help business making decision in establishing a wildlife tour around Brisbane area. My initial attempt was to find the number of koala occurrences around Brisbane. But I realized the number itself alone does not have any meanings. Then I started exploring other regions and came up with a graph plotting all the occurrences according to the coordinates. This provided a clear comparison of Brisbane with nearby regions. It showed that Brisbane and Gold Coast have the most number of koala occurrence from the period of time. As the tutor said I should now concern other factors to help the business further with the decision, I started looking at the time of the koala occurrences to see which months of the year should the tour be established. Even though I thought my analysis is fairly comprehensive, the feedback stated I assumed that the monthly occurrences are the same for different

years and ignored different area inside Brisbane. I really appreciated the feedback as it helps me recognize the importance of thinking in the business perspective and handling the data objectively and realize how my lack of critical thinking skill is. I should always try not to make any assumptions about the data I received. The more questions I can answer, the more comprehensive and meaningful my analysis is. With the assignment, I had a chance to apply QDAVI technique and keep some key notes for myself.

From week 7 onwards, more advanced concepts are presented. I got to study web scrapping, which is something of my concerns previously as I have involved in some projects using scrapping to acquire data. To gather millions records of data, I think web scrapping is an extremely useful technique. The unit only mentioned scrapping for server-side rendering application where the contents are rendered and available when we get the webpages. But for client-side rendering webpages, we do not get the content when we request it with BeautifulSoup. Python have some package like Selenium to handle this and I think it is crucial to include this.

Assignment 2 requires me to do TWOS analysis, which I have never done before. I have researched about this type of analysis and realized it was the same with SWOT analysis but we recommend actions at the end. This technique is effective as it separates external and internal data to give an unbiased and broad recommendation. I chose option 1 and was successful in not assuming two datasets are from one business. I noticed a small difference in sales and it turned out I was supposed to use only one dataset that align to my scenario. This further encouraged me to remember to always make sense of that data I receive and avoid making false assumptions.

Throughout the exercises and assignments, I acknowledged that my skill of thinking in the business perspective is poor. I also sometimes made false assumptions. Data analysis is to improve business performance so it is of utmost importance that I have the ability to look at the problem in different aspects, making objective questions and expand the questions further.

Since I do have good programming skills, it is now the time I need to improve my knowledge in different business aspects. My plan is to find different open datasets addressing various business concerns and make my own data analysis reports. I should always approach the problem slowly by thinking why the stakeholders want me to address this and extend my work further. In addition, regularly researching real business cases involved data analysis process and industry standards is also essential to develop my critical thinking skill and gain experience about business analytics.