STM5IPL Reflective Report

Michael Le 216289299

- Identify challenging incidents you experienced during placement.

One of the main challenges when coming into the industry placement is assuming there is a high level of expectation of familiarizing with their domain in sports analytics and familiarizing my own strengths and weaknesses when understanding some of the tools, technologies, and mathematical concepts taught during my post-graduate studies from La Trobe University. Coming in person, are you a little aware of the business objective? What is it the organization they are trying to accomplish? Doing the placement with little or no experience working with accurate data in data science was my biggest challenge. When I first came to the office in person, I was surprised to meet the lead coach, Peter Green, during the first meeting. I wanted to demonstrate a willingness to understand how the work has been performed in ways they can maintain and help a successful business accomplish its goals. In addition, I have been self-taught in programming languages and visualization courses from Coursera, DataCamp, Codecademy, and FreeCodeCamp from top data science and data analytics mentors who are professionals in their fields. When it comes to collecting data, the project's scope and the data's size were to create a player and team performance dashboard. To bring data insights and narratives of how we can compare and recruit top-talent players into the Australian Football League by further clarifying the lead coach at the Sandringham Football Club.

- Relate the incidents to your skills and experience working with others in an organization.

When working and adapting to the Australian culture and the organization when collaborating with others in an intensive work environment. My first instant was to understand each of our capabilities, figuring out what our strengths and weaknesses are in terms of experience and familiarity when executing the tools, what goals and desires we wanted to achieve in a particular manner where every employee is treated equally and respectively with the work expertise, they are proud of. When understanding what the Data Analyst role is about,40% of the time, I have applied my technical skills, and 60% of the time, I have applied my soft skills by communicating. We have some experience in Excel, Tableau, and Power BI. My colleague and I would frequently discuss our findings and ask questions regarding how we could understand the data during the placement with the lead coach through What's App. After discussing which data visualization platforms, we decided to use Power-BI (Business Intelligence), used by Microsoft, to present and provide our data to prevent data leakage from showing to other team members using the platform privately to avoid displaying personal or sensitive data in public. We aim to maintain our deliverables to the lead coach and their organization to propose what we want to achieve and provide accurate findings regarding the job. To accomplish that, my colleague and I avoided overlapping our work, so we split the folders and files and promised each other to get some of the questions and inquiries out of the way. This is to ensure we do not lead to confusion about how we efficiently approach the raw data. This can achieve speed and efficiency to reduce the workload during the industry placement and finish much work within the slotted timeframe. Overall, we are open-minded with our ideas and execution through our data analysis to consider fairness for every player and team contributing to Foundry Athletic's success.

- How do you think your knowledge and skills equipped you to deal with these incidents?

I have applied my problem-solving skills for some incidents when I need to familiarize myself with the data or have any business experience in their domain. As a data analyst, I always have a sense of curiosity and understanding. I must always do my research to understand the value and primary purpose of what the organization requires. What findings does the organization need? When collecting the data, I asked myself what kind of data we must collect? Is the data adequately cleaned? Transformed? And what conclusions can we come up with that satisfy organizational standards? After receiving and collecting the data, my first approach is always asking many questions; constant communication, collaboration, and teamwork are essential in any workforce when you are stuck facing a problematic situation on the task or the problem at hand. It gives a good impression of the organization and demonstrates your trust in stakeholders and that you are committed to learning what their organization does to get the job done right. We need to keep and read up to date with frequent updates through their social media and platforms that they use to expand more clients and develop strength and

conditioning for future players and athletes. To always have a keen eye for attention to detail, I often take notes on my laptop using my notepad and save the information into a Word document or write by hand. Keeping all vital information regarding what tasks need to be done to fully implement the entire scope comes into hand in advance to write reports and assessments for a complete data analysis falling under iterative and traditional management standards.

- What skills have you used or developed, and what have you learned from your placement?

I mainly developed skills using statistical programming languages like Python and SQL to apply data and statistical analysis. I used Python more frequently than R, where I used to apply machine learning models and analytics, which is very useful and efficient for large datasets. Using the resources I have taught from university and online courses, I have implemented Pandas and Numpy packages to support large and multi-dimensional arrays, building data structures, operations numerical, and time series. In addition, I have used packages such as Matplotlib and Seaborn for data visualization and enhanced graphics. Merging all files containing folders such as 2km Results, GPS Data, Gym and Strength Testing Data, Height and Weights Data, and Lastly Player Football Match Statistics. I have converted the Excel files into CSV files for easy compression to extract the data into Jupiter Notebook and merge different tables from different files based on the player column. Check for any duplicates or numbers of missing null values, names that are missing, or misspellings, and check the data types to see if there are further inconsistencies during the data collection phase.

Furthermore, I analyzed team averages, standard derivations, and z-scores to understand patterns and distributions using the normal distribution to measure how the players performed. In addition, I utilized Structured Query Language, a data manipulation language tool used for adding, deleting, and modifying the data in the database. I applied this tool to the GPS Data on Team Season Averages in Microsoft Excel. To answer every question asked and every requirement from the lead coach to ensure our team is confident and up to date with the execution performed in Microsoft Excel Spreadsheets. Understanding how we communicate based on our findings, bringing valuable data insights before we finalize into the Power-BI Dashboard to double check any more improvements such as cleaning, transforming, further analysis, or enhancements needed to be adjusted before we fulfill our results. To guide and inform

critical business decisions on how we hand-pick key talent and understand further data analysis and trends within our data. By selecting only 12 players out of at least 100 from the Sandringham Dragons Football League when they turn 18 and managing consistent and intensive physical training. To analyze if the player and team have improved from 16 – 18 years of age using critical comparisons such as averages tracking on and off-field data with further approval from the lead Australian Football coach and supervisor to be eligible in the Australian Football League.

- How is your work placement relevant to your future career choice?

For my work placement, it is good to have real-world experience when working with real-world data, regardless of which sector or industry is currently out in Australia or overseas, despite the job market in data science now becoming saturated. However, the chances of landing an entry-level future job title are fierce and tight by practicing enough and adapting more interview questions, such as behavioral and technical questions. That can give me a competitive edge to ensure I can cooperate, answer them honestly, and focus and prioritize the critical tasks. I am very grateful and delighted for this industry placement opportunity, which helped me enhance my resume and stand out for recruiters. Creating more opportunities to see someone who has valuable experience when working with accurate data as to someone who is soon to be graduating with no experience despite there being competition out there who are willingly doing the same work or similar goal or passion, they are working towards to as a data professional. To advance their futures or career paths, whether in Data Science, Analytics, AI, healthcare, marketing, finance, sports, or education. In addition, I have been continuing to upskill my resume by attending networking events and support through the university and taking instruction through many mentorships that guided me to realize my full potential. In addition, I have been applying to more courses that have taught me how to create data science projects, website or game development, and data portfolios, and I have competed in data science hackathons outside of university and during work hours. Who enjoys crunching numbers, applying statistics, and working

with collecting, storing, managing, analyzing, interpreting, and visualizing their data on daily dashboards in Microsoft Excel, Power BI, or Tableau? I have been obsessed with creating projects after completing some online courses; I am open to making personal or impactful projects to deliver to a certain extent or audience through LinkedIn and networking. It can help me improve my self-learning and adapt more to new opportunities that never occurred to me to try and apply myself through many applications to ensure I will get to the entry-level role as soon as possible within 5 years from now on. I believe that after graduation and internship, it takes a lot of time to become resilience, patient, and determination, and humble with the connections around me whom I can trust and build bonds with are my biggest strengths that I believe will help me land into the desired future career of my choice.

- Evaluate how your role in the organization contributed to the cultural and social understanding of people in the organization.

How does my role contribute to cultural and social aspects? Everyone comes from different backgrounds and cultures and has the same shared values. Understanding what values and goals everyone wants to pursue, if they align with their physical health and well-being or on the path to recovery. Embracing the Australian culture and understanding how people work and cooperate under certain conditions such as indoor and outdoor activities. Our central focus is on strength and conditioning or seeking specialized training programs on the path to recovery for future athletes. I think my role can bring impact into the organization; I first thought that this role is not just crunching numbers; it is delivering a message, communicating to people from different domains, and collaborating ideas to drive businesses forward that create value and impact for the organization. In a way that envisions and understands from the industry perspective, my role can help inspire future generations of sports analytics and aspiring data analysts and data science professionals. To ensure that we give every player and athlete opportunities to contribute to one of the biggest sporting venues across Victoria, Australia. My contribution and overall experience have been highly positive and overwhelming regarding the complexity and understanding of adapting to the Australian workforce. Embracing the culture and society regarding the conventions Foundry Athletic and Sandringham Dragons Football Club has to offer. Overall, this was a fulfilling experience where I got close to my supervisor and guidance that helped me enhance my curiosity and critical thinking and come up with open-ended questions that

could lead us to valuable conclusions about how my role contributes to the overall organization's success at its finest.

+/- 10% give or take 2000 words