Individual Reflection

[**https://github.com/shingi2020/tm\_portfolio/tree/main/Research%20Methods**](https://github.com/shingi2020/tm_portfolio/tree/main/Research%20Methods)

# What

In this module, I examined hypotheses in two areas of study. One was focused on how machine learning using sentiment analysis could be used in making football predictions, and the other was on my research proposal on the use of cross-channel recommender systems in online retail sales.

## Literature Review

For the literature review, I explored a topic of interest, which is football. With the 2025/2026 season approaching, I wondered if it would be possible to use past results and previous league standings to predict who would win the English Premier League. I further wanted to explore if crowd-sourced data from social media could provide expert advice and be integrated into the predictive model. My approach for this study was to first understand how current predictive models work and the research on this topic on a variety of sports beyond football. This led me to the study by Reed and Donoghue (2005), Buursma (2010), and Huang and Chang (2010), who explored predictive models in football and rugby. From my research, I got to understand that there are different approaches to what is predicted. In some of the research, the researchers looked at predicting the number of goals on target, goals scored, and corner kicks, which is termed a goal-based study (Baboota and Kaur, 2018). This did not interest me as much; I wanted to predict the most sought-after predictions by bettors and fans, which are result-based. That is predicting a Win, a Loss or a Draw. Further research revealed that there have been a number of studies on the topic, with researchers comparing different machine learning algorithms in result-based studies.

Understanding how the current predictive models work led me to the next part of my study, which was integrating sentiment analysis into the prediction models to give more accurate results. The question I posed was “Can crowd-sourced data from social media be as accurate as expert analysis in predicting football results?”

For my research proposal, I took a rather ambitious approach. I came across the Joe Rogan podcast in which he was interviewing Shoshana Zuboff, author of the book “Surveillance Capitalism” and “Age of Surveillance Capitalism”. Her interview gave me insights into how emerging technologies are being used by big tech to influence public perceptions. I found this interesting and wanted to investigate if this would be feasible in business. Particularly in increasing customer spend and thus increasing profits for companies.

# So What?

The experience of researching my literature review and research proposal topic showed me that if you take a systematic approach to your research, in this case, the literature review, you can uncover some rich insights. Having now understood what was currently available and had been researched in the field of football prediction, the next part was to explore research on the integration of social media data. As I researched the topic, I realised that a strong statistical understanding is of great importance. Unit 7 exercises were crucial in allowing us to understand the methodologies that were put forth by the researchers.

I have made a mental note that for my dissertation, I will need to ensure that I continuously refresh my knowledge on statistics.

The research proposal revealed that I need to be mindful of ethical considerations, customer privacy, algorithm transparency and consumer awareness of how their data is being used.

I acknowledge that allocating additional time to the study might have enabled the identification of further relevant research to include in the proposal. The field of AI ethics is substantial and continues to expand as scholars increasingly investigate the implications of an AI-driven world for humanity in the foreseeable future.

## Now What?

To successfully complete my dissertation, I must allocate sufficient time to reviewing scholarly articles, documenting reflections on pertinent studies, and constructing mind maps to analyse key findings and identify prospective areas for further research.

Enhancing my academic writing skills remains a priority, particularly in articulating complex methodologies and conveying arguments clearly and cohesively. The ability to present intricate ideas in a structured and comprehensible manner is a vital competency in academic scholarship.

The exercises provided in this module have significantly enhanced my research and proposal writing capabilities within my daily responsibilities. In my current position, I am responsible for data collection and contributing to proposal development for funding opportunities. Given the increasingly constrained funding environment resulting from USAID cutbacks, the competencies gained from this module have reinforced areas where I previously lacked confidence.

The ability to conduct systematic literature reviews remains essential within the humanitarian sector. This skill is invaluable for designing innovative programmes by leveraging existing research and contextual knowledge to develop tailored interventions.

Engaging with colleagues and peers regarding my research proposal and literature review, as well as articulating the details of the study, proved to be an effective method for critically examining my thought processes and confirming my understanding of the research area. The capacity to convey complex topics clearly is a skill I intend to continually refine and apply not only within academia but also in my broader professional life.

References

1. Reed, D. and O’Donoghue, P., 2005. Development and application of computer-based prediction methods. International Journal of Performance Analysis in Sport, 5(3), pp.12-28.
2. Buursma, D., 2010. Predicting sports events from past results. In 14th Twente Student Conference on IT (Vol. 21).
3. Huang, K.Y. and Chang, W.L., 2010, July. A neural network method for the prediction of the 2006 World Cup football game. In The 2010 International Joint Conference on Neural Networks (IJCNN) (pp. 1-8). IEEE.
4. Baboota, R. and Kaur, H., 2019. Predictive analysis and modelling football results using a machine learning approach for the English Premier League. International Journal of Forecasting, 35(2), pp.741-755.