Supporting Report

My approach to evaluating Messi’s passing ability was mainly assessed through my personal knowledge about the game of football. Throughout this project, I relied heavily on my tactical knowledge from a player’s perspective as well as from a coaching perspective. In my implementation plan, I wrote out my criteria on what is a good pass using my experience within football. However, at points, it dawned on me that I would not be able to perform my complete assessment of Messi’s passing ability. This is because there was a firm deadline, limitations based on limited Statsbomb 360 data, and limited information that can be presented in five slides.

As a result, a major limitation within this project is that the sample size is limited to only matches within the 2022 FIFA World Cup for most measurements. Naturally, this increases the variance of the results which causes outliers to have a significant impact on results and potentially cause inaccurate analysis. This was mitigated by performing external research and fact checking all results prior to submission. Additionally, this project was made easier by the fact that Messi is widely regarded as one of the best players to ever play football. As such, he is also regarded as one of the best playmakers in today’s game. This emphasizes the importance of external research and general knowledge within the world of football.

I chose to mainly analyze data from the 2022 FIFA World Cup because there was Statsbomb 360 data that was available for multiple matches as well as events within this competition. The presence of this data was critical for this project since it provided the means to which I could analyze the location of both teammates and opponents at the time of Messi’s passes. This provides the audience a better idea of the player’s circumstances at the time of the pass and some insight into patterns of play. While this is ideal for this type of analysis, the downside is that the sample size is a small one. To provide more multidimensional analysis, I analyzed Messi’s danger passes from the 2014-15, 2017-18, and 2020-21 La Liga Seasons, as well as a visualization evaluating Messi’s incomplete passes during the 2020-21 La Liga season.

Throughout this process, there were numerous times where I had to pivot and overcome obstacles that were preventing me from capturing the output I was looking for. During the early stages of this process, my main obstacle was finding a way to import the JSON file into a programming software to accurately read the data. This was overcome by utilizing external resources, notably McKay Johns’ YouTube videos to get me started on this process. I chose to use Jupyter Notebooks to write my scripts in Python since I am already familiar with the software and adept at writing and organizing my code using Python language.

A major takeaway from this project is to take more time to really look at the raw data before conducting extensive analysis. This lesson was learned when I was trying to plot freeze frame data for a specific pass and there was an error code saying that the ‘the float object is not iterable’. Upon troubleshooting this problem, I realized that the pass that I was trying to plot did not have 360 freeze frame data available. Checking if there was a “uuid” for that specific row would have saved me a lot of time. There were a lot of problems that needed to be solved to execute on the deliverables. However, those challenges made the outcome extremely fulfilling once I learned how to solve them. Perseverance was the virtue that I utilized the most during this project.

Given more time, I would have incorporated different methods of analysis to support my data visualizations. Performing linear regression to determine which variables were statistically significant is a step that would have been invaluable since it would have validated the measures used to evaluate Messi’s passing ability. Furthermore, I would have used more sophisticated measures to further analyze Messi’s passing ability such as incorporating expected threat, expected pass completion, and expected goals resulting from his passes. In any football match, it is also important to measure the tempo of the match. This analysis provides insights into how Messi performs against certain play styles and tactics. Furthermore, in football, the performance of a player is largely dependent on the team that is supporting them, the role they are asked to fill, and the play styles that the manager establishes. To capture these nuances, further cross-competition analysis is required for a complete assessment of Messi’s passing ability.

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