**Annotated Bibliography**

**Name:** BUS 9420 Fall 2019 Group 5

**Name of Paper**: Cybermetrics: Liverpool FC - Optimizing performance through intuitive coaching, player, and team analysis

**Thesis**: Liverpool FC is a Premier League football club based in Liverpool, England. Using data analytics to evaluate players that compliment the team’s coaching style, this team can improve on historical performance.

**Source 1**

Kaggle

**Citation**

Leone, S. (2019, September 26) *FIFA 20 complete player dataset*

Retrieved from <https://www.kaggle.com/stefanoleone992/fifa-20-complete-player-dataset>

**Summary**

FIFA 20 complete player dataset was culled from sofifa.com by Stefano Leone using a Python script. It boasts 104 variables/attributes on over 15,000 players. It is one of eight datasets, and one of three soccer datasets uploaded by Leone.

**Support**

Kaggle is a data repository of public datasets. KAGGLE is an online community of data scientists and machine learners, founded in 2010 and currently owned by Google LLC. Kaggle is a forum on which companies and present data related problems, and analysts have the opportunity to develop algorithms to solve those problems. As such it is a repository as well as a community. This dataset is the basis of our analysis.

**Source 2**

ESPN

**Citation**

Ogden, M. (2018, November 30) *Premier League's biggest rivalries: Manchester United, Liverpool have plenty of grudge matches*

Retrieved from <https://www.espn.com/soccer/english-premier-league/23/blog/post/3712917/premier-leagues-biggest-rivalries-manchester-unitedliverpool-have-plenty-of-grudge-matches>

**Summary**

This article compares league teams using the following metric: history, current importance and unpredictability,on a scale of 1 to 5 (1 = barely registers, 5 = through the roof).

Chelsea vs. Liverpool - 10/15 [3+3+4]

Liverpool vs. Manchester City - 12/15 [2+5+5]

Liverpool vs. Manchester United - 13/15 [5+3+5]

It uses historical game data, and specific incidents on the field.

**Support**

Although Liverpool vs. Everton is mentioned in the article, it receives a rating of 8/15, the lowest of Liverpool rivalry ratings in this article, and supporting our choice of Chelsea, Manchester City, and Manchester United as Liverpool’s three direct rivals.

**Source 3**

ESPN

**Citation**

Cox, M. (2016, December 30) *Contrasting approaches of Guardiola, Klopp makes for intriguing matchup*

Retrieved from <https://www.espn.com/soccer/english-premier-league/23/blog/post/3028196/contrasting-approaches-of-guardiola-klopp-makes-for-intriguing-matchup>

**Summary**

This article goes into a deeper analysis of coaching styles between Jurgen Klopp and Pep Guardiola. It discusses Klopp’s aggressive “*gegenpressing*” style of running and attacking, as opposed to Pep Guardiola’s more cautious and calculating approach.

**Support**

We take this information about coaching to guide our analysis as well look at player data in terms of which players compliment the coach’s style, and vice versa.

**Source 4**

The Guardian

**Citation**

Hunter, A. (2019, June 27) *Liverpool to sign Dutch defender Sepp van den Berg from PEC Zwolle*

Retrieved from <https://www.theguardian.com/football/2019/jun/27/liverpool-sign-defender-sepp-van-den-berg-pec-zwolle-jurgen-klopp>

**Summary**

This article discusses the acquisition of 17-year old Sepp van den Berg by Liverpool as a player that can be moulded into the team by coach Klopp. It also discusses his valuation as liable to change based on wins and losses. Van den Berg states his desire to improve his defending skills from future teammate Virgil van Dijk.

**Support**

The article uses clear quotes to demonstrate the intent of the player being recruited. It also gives a specific dollar value for recruitment, along with reason for transitioning to Liverpool. Though we are aware that van den Berg now plays for Liverpool, the article shows the motivation for this player’s recruitment.

**Source 5**

Bleacher Report

**Citation**

Dudko, J. (2019, March 9) *Matthijs de Ligt Talks Up Virgil van Dijk and Possible Liverpool Move*

Retrieved from <https://bleacherreport.com/articles/2824680-matthijs-de-ligt-talks-up-virgil-van-dijk-and-possible-liverpool-move>

**Summary**

This article features Matthijs De Ligt, former player for Ajax, (currently on the Juventus team).

And shares that the following teams have expressed interest in him: Arsenal, Juventus, Manchester City and Real Madrid.

**Support**

This article shows a clear interest from a top player to join Liverpool to add to the skillset and star power of LIverpool’s Virgil van Dijk, as opposed to any other team which may be interested in recruiting him. Though De Ligt currently plays for Juventus, this article shows that he has a strong interest in playing for Liverpool.

**Dimension Chart**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Source** | **Context** | **Currency** | **Accuracy** | **Reliability** | **Bias** | **Score** | **Weight** |
| 1: *FIFA 20 complete player dataset* | **5**  This is the primary dataset used in team 5’s analysis of LIverpool FC. It is data that covers teams and players | **5**  This dataset was submitted to kaggle on 9/26/19, which makes it slightly over one month old. | **5**  This data is culled from sofifa.com, owned by EA Sports, a video game developer which uses this date to create realistic gaming experiences. | **5**  This dataset was uploaded by Stefano Leone, Postgraduate student in Data Analytics at National College of Ireland, who has uploaded 8 datasets to kaggle in the past 2 years. | **5**  This data can be used to analyze any team, not just LIverpool FC. As such it is not biased in favor of a team or player. | **25** | **1.0** |
| 2: *Premier League's biggest rivalries: Manchester United, Liverpool have plenty of grudge matches* | **5**  This article provides support for our choice of Liverpool rival teams, and gives some historical context to those rivalries. | **3**  Article is almost one year old, but has good historical information which is not likely to change in the short term. | **4**  Though the writer’s metrics are in no way scientific or quantifiable, he makes his case using factual historical data. | **5**  This article was written by football journalist Mark Ogden, at ESPN since 2017. ESPN has been as cable sports channel since 1979. It is a household name for sports news. | **4**  The author uses actual incidents on the field between players, and cites specific games to back up his analysis. | **21** | **0.84** |
| 3: *Contrasting approaches of Guardiola, Klopp makes for intriguing matchup* | **5**  This article goes into a more detailed analysis of coaching style than source #3. | **2**  Written on 12/30/16, it is fairly dated information. This article is used as more current articles do not give such thorough analysis. | **5**  The information in this article is historically accurate, and corroborates coaching styles in more recent matches. | **5**  Michael Cox is a regular contributor to ESPN, The Guardian, and The Independent. ESPN is cable sports channel founded in 1979. It is a household name for sports news. | **5**  In his analysis, the writer does not make an argument for one coach versus the other, but simply highlights the styles of each, stating that “the reality remains to be seen”. | **22** | **.88** |
| 4: *Liverpool to sign Dutch defender Sepp van den Berg from PEC Zwolle* | **5**  This article details recruitment of a player to improve team performance, which adds to trade analysis.. | **3**  This article is a little over four months old, dated 6/27/19. | **5**  This article corroborates information presented on the Liverpool website. | **5**  The Guardian started as a British daily newspaper, in circulation since 1821. | **5**  This is a brief article which simply documents the recruitment of van den Berg, and quotes him directly, there isn’t much analysis or room for bias. | **23** | **.92** |
| 5: *Matthijs De Ligt Talks Up Virgil Van Dijk and Possible Liverpool Move* | **5**  This article details a player’s interest in playing for Liverpool, which adds to trade analysis.. | **3**  This article is eight months old, dated 3/9/19. | **5**  James Dudko has been a writer for Bleacher Report for eight years, which can be considered a solid career in the industry. | **5**  Bleacher Report has been in the business of sports news since 2007, and is a trusted name in this industry. | **5**  This article does not opine on the player’s future performance, but shares that he possibly at a career crossroads where he may venture on to another team such as Liverpool. | **23** | **.92** |