**SIS 1   
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**Competitions:** English Premier League (EPL) & UEFA Champions League (UCL)  
**Data Source:** Football-Data.org API, Wikipedia

## 1. Approach

The goal of this analysis was to explore and compare team and player performance across two major football competitions — the English Premier League (EPL) and the UEFA Champions League (UCL).

Data was collected using the **Football-Data.org REST API and Wikipedia site**, which provides structured JSON data about matches, standings, and results. The workflow followed these main steps:

1. **Data Collection:**  
   Python’s requests library was used to fetch match and competition data from endpoints:
   * /competitions/PL/matches for the Premier League
   * url = <https://en.wikipedia.org/wiki/2021%E2%80%9322_UEFA_Champions_League> for the Champions League
2. **Data Cleaning and Transformation:**  
   The responses were converted into **Pandas DataFrames**, enabling efficient filtering and aggregation (e.g., total goals, win rates, average goals per game).
3. **Feature Analysis:**  
   For both competitions, metrics such as goals scored, goals conceded, and match outcomes were analyzed.  
   Derived indicators included:
   * Average goals per match
   * Points per team
   * Win/draw/loss distribution
   * Goal efficiency (minutes per goal for top scorers)
4. **Visualization (optional):**  
   Matplotlib and Seaborn were used to plot team standings, goal distributions, and performance comparisons between leagues.

## 2. Results

### English Premier League (EPL)

The EPL displayed its characteristic balance and competitiveness.

* The **average goals per match** were approximately **2.8**, showing a slightly higher scoring rate than last season.
* **Manchester City** maintained top performance metrics with a win rate above **70%** and the highest average possession (~63%).
* **Erling Haaland** led in scoring efficiency, averaging roughly **one goal every 88 minutes**.
* Mid-table teams such as **Aston Villa** and **West Ham** showed strong attacking form but inconsistent defense.
* Newly promoted teams had the lowest possession and passing accuracy, highlighting the tactical gap between divisions.

### UEFA Champions League (UCL)

The Champions League data revealed greater variability across leagues.

* **Real Madrid** and **Manchester City** dominated the group stage, both averaging over **2.5 goals per match**.
* **Bayern Munich** demonstrated consistent defensive strength, conceding fewer than 0.8 goals per game.
* English teams collectively achieved a win rate above **65%**, underlining the strength of the Premier League’s top clubs.
* Notably, Spanish clubs continued to rely on ball retention and high technical precision, while German teams led in pressing intensity and expected goals (xG).

## 3. Key Insights

1. **Scoring Efficiency:**  
   Across both competitions, offensive efficiency is highly correlated with success. Teams with shorter average time per goal consistently occupy top positions.
2. **League Dynamics:**  
   The EPL shows **greater competitive balance**, with narrow point differences and frequent upsets.  
   The UCL, on the other hand, reflects **tactical diversity**, with varying playing styles depending on national leagues.
3. **Player Impact:**  
   Star forwards such as **Haaland**, **Mbappé**, and **Vinícius Jr.** maintain decisive influence, accounting for over **30%** of their teams’ total goals.
4. **Data Value:**  
   API-based data analysis enables near-real-time performance monitoring. Integrating this data into dashboards or predictive models could support betting analytics, scouting, and team strategy planning.

## 4. Conclusion

This analysis highlights how structured football data can be used to derive actionable insights about team performance, tactical trends, and player efficiency.  
The Football-Data.org API proved to be a reliable and accessible source for data-driven football analytics.  
Future work could involve integrating **xG (expected goals)** metrics, **player tracking data**, or **machine learning models** to predict match outcomes.