Project Title	**Soccer Player Performance Analysis**
Skills Away from This Project	**MS Excel, SQL, Tableau, or Power BI**
Domain	**Sports**

Problem Statement:

Analyze soccer player performance data using Excel, SQL, Tableau, and Power BI to gain insights into skills and trends.

Business Use Cases:

1. **Player Scouting:** Identify high-potential players based on performance metrics for recruitment.
2. **Performance Analysis:** Assess player skills to optimize team formations and strategies.
3. **Injury Prevention:** Analyze physical attributes to reduce injury risks and improve fitness regimens.
4. **Fan Engagement:** Tailor marketing strategies using player performance data to enhance fan experience.
5. **Contract Negotiation:** Use performance insights to justify player salaries and contract terms.

Approach:

Data Collection: Extract player performance data from databases using SQL queries.

Data Preprocessing: Clean the dataset to address missing values and standardize metrics.

Exploratory Data Analysis (EDA): Utilize Tableau or Power BI to visualize player statistics and trends.

Feature Engineering: Develop new metrics that enhance player evaluation and comparison.

Visualization and Reporting: Create interactive dashboards in Power BI or Tableau to showcase insights and recommendations.

Player Insights: Detailed understanding of player performance metrics and potential.

Scouting Recommendations: Data-driven suggestions for identifying talent for recruitment.

Business Reports: Comprehensive reports and dashboards highlighting key metrics and findings.

Interactive Dashboards: User-friendly dashboards that provide real-time insights into player statistics and trends.

SQL Proficiency: Enhanced skills in querying databases to extract and analyze player data effectively.

Excel Analysis: Mastery of Excel for performing advanced data analysis and visualization of player performance metrics.

Project Evaluation metrics:

Data Accuracy: Correctness and reliability of player performance data used in analysis.

Insightfulness: Actionability and relevance of insights derived from the analysis.

Visualization Quality: Clarity and interactivity of visualizations presenting player statistics.

Report Completeness: Thoroughness and comprehensiveness of final performance reports.

User Feedback: Satisfaction and usability feedback from stakeholders regarding the dashboards.

Technical Tags:

#DataAnalysis

#SQL

#Excel

#DataVisualization

#PowerBI

#Tableau

#PerformanceMetrics

#FootballAnalytics

#DataPreprocessing

#BusinessIntelligence

#DashboardDesign

#PlayerScouting

Data Set:

https://drive.google.com/drive/folders/1gJXQ_Lhib-Z3m4zXiRsh9f7byw9g5fNr?usp=sharing

Data Set Explanation:

Content: The dataset includes player performance metrics, demographic details, and club information for soccer players.

Context: The dataset aims to evaluate player capabilities and potential, with metrics indicating skills, physical attributes, and market value. Preprocessing steps may include:
● Handling missing values.
● Normalizing performance metrics.
● Segmenting data for targeted analysis.

The columns for the dataset specifies their functionalities, which is listed below:

Wage (€): The player's salary in euros.

Value (€): The estimated market value of the player in euros.

Name: The full name of the player.

Age: The player's age.

Nationality: The country the player represents.

Overall: The overall skill rating of the player.

Potential: The highest skill rating the player can achieve.

Club: The current football club of the player.

Special: A special skill or attribute identifier.

Performance Metrics: Various attributes such as acceleration, agility, dribbling, and shooting stats.

Position Columns (e.g., CAM, CF, LW): Indicates the player's preferred positions on the field.

Project Deliverables:

SQL Queries: Scripts used for data extraction and analysis.

Data Preprocessing Documentation: Detailed steps and methods for cleaning and preparing the dataset.

Performance Reports: Comprehensive PDF/Word reports summarizing player insights and recommendations.

Dashboards: Interactive dashboards created using Power BI or Tableau to visualize key metrics.

Presentations: Slide deck summarizing the project findings for stakeholder presentations.

Project Guidelines:

1. **Coding Standards:** Follow industry-standard practices and write clean, maintainable SQL queries.
2. **Documentation:** Maintain comprehensive documentation for all project stages.

Key Questions for Player Performance Analysis (SQL and Power BI/Tableau):

1. Identify the top players by overall rating.
2. Calculate the average age of players in each position.
3. Determine the market value distribution among different nationalities.
4. Analyze performance metrics of players by club.
5. Find the most common positions played by top-performing players.
6. Identify players with the highest acceleration and agility ratings.
7. Calculate the average wage for players in each league.
8. Discover trends in player performance over the last few seasons.
9. Determine the potential vs. overall rating for young talents.
10. Identify players with multiple preferred positions and their performance metrics.
11. Analyze correlations between physical attributes and skill ratings.
12. Calculate the average market value of players by age group.
13. Identify players with the best free-kick accuracy.
14. Create visualizations for player statistics comparisons by club.
15. Develop queries to identify players at risk of being transferred based on performance.

Timeline:

The timeline for this project is 3 weeks from the day of orientation.

PROJECT DOUBT CLARIFICATION SESSION (PROJECT AND CLASS DOUBTS)

About Session: The Project Doubt Clarification Session is helpful for resolving questions and concerns about projects and class topics. It supports understanding project requirements, addressing code issues, and clarifying class concepts. The session aims to enhance comprehension and provide guidance to overcome challenges effectively.

Note: Book the slot at least before noon on the same day

Timing: Tuesday, Thursday, Saturday (5:00 PM to 7:00 PM)

Booking link:https://forms.gle/XC553oSbMJ2Gcfug9

LIVE EVALUATION SESSION (CAPSTONE AND FINAL PROJECT)

About Session: The Live Evaluation Session for Capstone and Final Projects allows participants to showcase their projects and receive real-time feedback for improvement. It assesses project quality and provides an opportunity for discussion and evaluation.

Note: This form will Open on Saturday and Sunday Only on Every Week

Timing: Monday-Saturday (11:30 PM to 12:30 PM)

Booking link: https://forms.gle/1m2Gsro41fLtZurRA