**Introduction to FIFA  
  
FIFA** is one of the most popular football video games developed by EA Sports. It simulates real-life football matches and allows players to control football teams composed of real-life players. Each player in the game has attributes that affect their performance on the virtual pitch, such as speed, shooting accuracy, and defensive skills. These attributes are quantified in a dataset, which provides a wealth of information that can be analyzed to gain insights into player and team performance.

#### **Understanding the Fifa19 Dataset**

The Fifa19 dataset contains detailed information about football players featured in the FIFA 19 video game. The dataset includes attributes such as:

* **Name**: The player's name.
* **Age**: The player's age.
* **Nationality**: The player's nationality.
* **Overall**: The player's overall rating.
* **Potential**: The player's potential rating.
* **Club**: The club the player is affiliated with.
* **Value**: The player's market value.
* **Position**: The player's primary playing position.
* **Various Skills**: Specific attributes related to the player's abilities, such as goalkeeping skills (GK Diving, GK Handling, etc.) and field skills (Ball Control, Crossing, etc.).

**Data Dictionary for Fifa19 Dataset**

Please Download the File from here [FIFA\_Processed\_Data.xlsx](https://docs.google.com/spreadsheets/d/1ox9uw3gRVIi5nSx7SkbiAZcuyoFpoRWu/edit?usp=sharing&ouid=107376414674963367348&rtpof=true&sd=true).

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| ID | Integer | Unique identifier for each player |
| Name | String | Player's name |
| Age | Integer | Player's age |
| Nationality | String | Player's nationality |
| Overall | Integer | Player's overall rating |
| Potential | Integer | Player's potential rating |
| Club | String | Club the player is affiliated with |
| Value | String | Market value of the player (e.g., "€105M") |
| Wage | String | Player's weekly wage (e.g., "€200K") |
| Preferred Foot | String | Player's preferred foot (e.g., "Left", "Right") |
| International Reputation | Integer | Player's international reputation rating (1-5 scale) |
| Weak Foot | Integer | Player's weak foot rating (1-5 scale) |
| Skill Moves | Integer | Player's skill moves rating (1-5 scale) |
| Work Rate | String | Player's work rate (e.g., "High/Medium") |
| Body Type | String | Player's body type (e.g., "Normal", "Lean") |
| Position | String | Player's primary playing position |
| Jersey Number | Integer | Player's jersey number |
| Joined | String | Date the player joined the current club |
| Contract Valid Until | Integer | Year until the player's contract is valid |
| Height | String | Player's height (e.g., "5'7") |
| Weight | String | Player's weight (e.g., "159lbs") |
| LS, ST, RS, etc. | String | Player's ratings for different positions on the field |
| GK Diving | Integer | Goalkeeping diving skill |
| GK Handling | Integer | Goalkeeping handling skill |
| GK Kicking | Integer | Goalkeeping kicking skill |
| GK Positioning | Integer | Goalkeeping positioning skill |
| GK Reflexes | Integer | Goalkeeping reflexes |
| Ball Control | Integer | Player's ball control skill |
| Crossing | Integer | Player's crossing skill |
| Jumping | Integer | Player's jumping ability |
| Long Passing | Integer | Player's long passing skill |
| Long Shots | Integer | Player's long shots skill |

**Description of the Task**

Your goal is to use Tableau to create an extensive dashboard that illustrates many facets of the Fifa19 information. There should be four different charts on the dashboard, each offering a different perspective.

**Tasks:**

### **1. Player Performance Analysis**

**Task Question:**How do the overall ratings of players differ by nationality, age, and position?

* **Visualization:** Create a bar chart or heatmap showing the average overall rating for players, broken down by nationality, age, and position.
* **Insight:** This visualization can help identify trends in player performance across different nationalities and positions. You can also compare younger and older players' ratings.

### **2. Market Value and Wage Comparison**

**Task Question:**What is the relationship between a player's market value and their weekly wage, and how does this vary with age and overall rating?

* **Visualization:** Create a scatter plot that shows the market value on one axis, wage on the other, and use color or size to represent the player's overall rating or age.
* **Insight:** This will help you understand how player wages and market values are correlated, and whether higher-rated players also tend to have higher wages and values.

### **3. Player Position and Skill Analysis**

**Task Question:**Which player positions exhibit the highest average skill ratings (e.g., ball control, crossing, or shooting)?

* **Visualization:** Create a box plot or bar chart that compares skill ratings (like ball control, passing, shooting) across different positions.
* **Insight:** This visualization will reveal which positions excel in specific skills and if certain positions require specialized skill sets (e.g., forwards having higher shooting ratings, defenders having better tackling ratings).

### **4. Potential vs. Overall Rating Analysis**

**Task Question:**How does the potential rating of players compare to their overall rating, and are there significant differences based on age or club?

* **Visualization:** Create a scatter plot with potential rating on one axis and overall rating on the other, color-coded by age group or club.
* **Insight:** This will provide insights into how players with high potential ratings are performing relative to their current overall ratings, and whether younger players tend to have higher potential.

### **5. Age Distribution and Player Types**

**Task Question:**What is the distribution of player ages across different body types and work rates?

* **Visualization:** Create a histogram or pie chart to show the distribution of ages within different body types and work rates.
* **Insight:** This visualization will help you understand if certain body types or work rates are associated with specific age groups (e.g., younger players with lean body types).

### **6. International Reputation and Weak Foot Analysis**

**Task Question:**How does a player's international reputation correlate with their weak foot rating?

* **Visualization:** Create a bubble chart or scatter plot where the x-axis is international reputation, the y-axis is weak foot rating, and the size or color of the bubbles can represent the player's overall rating.
* **Insight:** This will allow you to analyze whether players with higher international reputation tend to have a better weak foot rating and whether there's any noticeable pattern.

### **7. Contract Information Overview**

**Task Question:**What is the distribution of contract lengths for players by club, and how does it affect their potential?

* **Visualization:** Create a bar chart that shows the average contract length by club, and use a filter or color coding to compare players' potential ratings.
* **Insight:** This visualization will give you a sense of how long players are signed with their clubs, and whether clubs with longer contracts tend to have players with higher potential.

### **8. Height and Weight Distribution of Players**

**Task Question:**How does the height and weight distribution vary by position or body type?

* **Visualization:** Create a scatter plot that shows height on the x-axis and weight on the y-axis, with different colors representing different positions or body types.
* **Insight:** This visualization will provide insights into whether certain positions (e.g., forwards vs. defenders) tend to have specific body characteristics like height and weight.

### **9. Top Players by Market Value**

**Task Question:**Which players have the highest market value, and what is their breakdown by age, club, and overall rating?

* **Visualization:** Create a bar chart or treemap showing the top players by market value, and use additional filters to break down the data by age, club, and overall rating.
* **Insight:** This visualization can highlight the players with the highest market value and allow you to compare them based on their other attributes like age and overall rating.

### **10. Top Performing Clubs**

**Task Question:**Which clubs have the highest average overall ratings, and what is the age distribution of players within those clubs?

* **Visualization:** Create a bar chart showing the average overall rating by club, and a pie chart or histogram for the age distribution within top-performing clubs.
* **Insight:** This helps you identify which clubs have the best-performing players overall and whether those clubs are made up of mostly younger or older players.

**Dashboard Creation:**

Design a comprehensive and interactive dashboard using Tableau to analyze and visualize key insights from the FIFA 19 dataset. The dashboard should include the following visualizations:

1. **Player Performance Analysis**: Display the average Overall rating of players categorized by Nationality and Position, providing insights into the top-performing countries and player roles.
2. **Market Value vs. Wage Comparison**: Visualize the relationship between player Market Value and Wage, with player Overall ratings as the size or color of the data points, helping to explore if higher-valued players also have higher wages and better ratings.
3. **Player Skill Analysis by Position**: Show how different positions (e.g., Strikers, Midfielders, Defenders) compare in terms of key skills such as Finishing, Dribbling, and Ball Control, giving an overview of skill distributions across various roles.
4. **Potential vs. Overall Rating**: Analyze the relationship between a player's Potential and their current Overall rating to identify players with the highest growth potential.

Ensure the dashboard is interactive with filters such as Position, Age, and Nationality for dynamic exploration, and present the findings in a clean and visually engaging format. The goal is to provide an intuitive and insightful analysis of FIFA 19 players, their market values, skill sets, and potential.

[[Click here to see the approach]](https://docs.google.com/document/d/1YWJWHwxDzBuKIsCJKpNH7gpxywerC2buLCGMv56gNBQ/edit?usp=sharing)