

FIFA 18 Global Talent Analyzer

Data Preparation:

Necessary data cleaning or enhancement steps:

- Ensured all numerical fields (age, height_cm, weight_kg, eur_value, eur_wage, overall, potential, pac, sho, pas, dri, def, phy) are properly formatted as numbers.
- Created a derived field for BMI (Body Mass Index) using height and weight.

Audience Persona Selection:

Selected persona: The Industry (Sports Analytics)

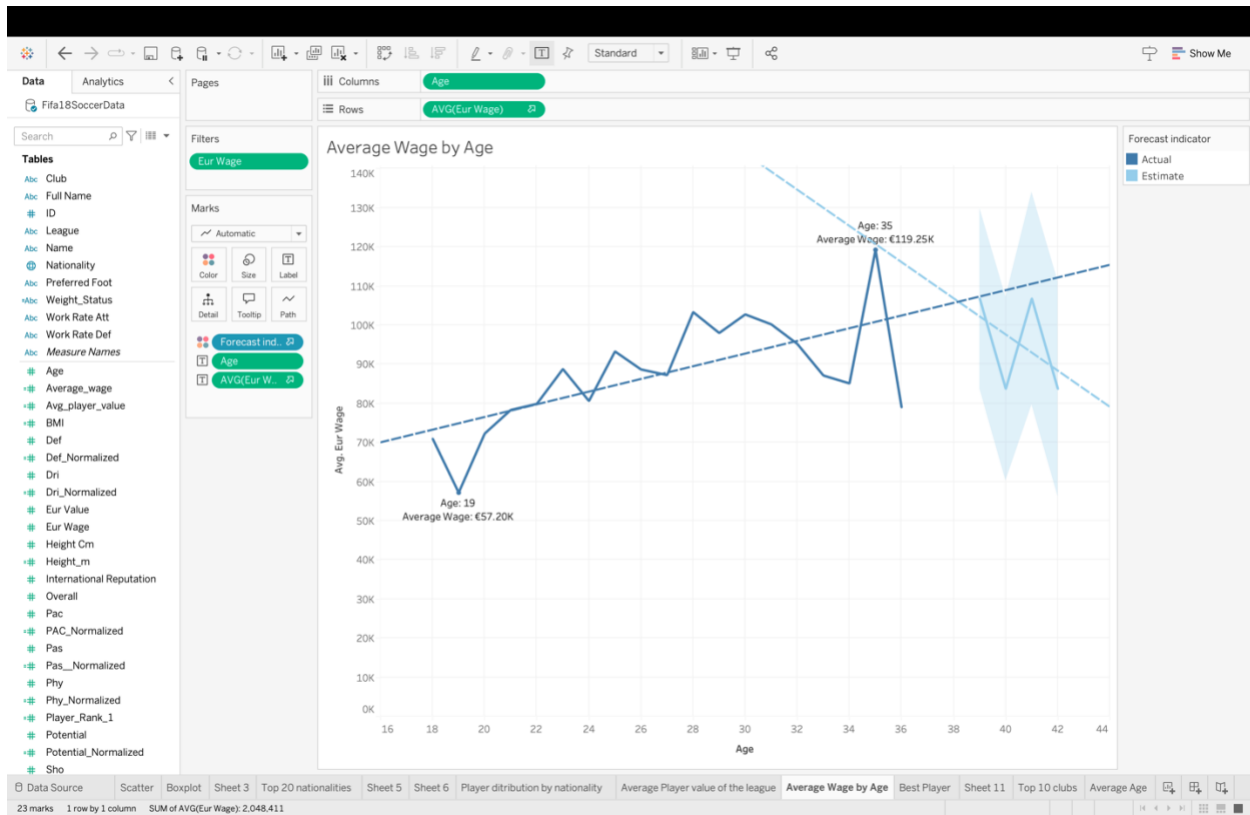
Rationale:

The industry persona, specifically sports analytics professionals, is the most appropriate for these visualizations because:

- They have the technical expertise to understand and utilize complex player statistics.
- They're likely to be interested in detailed player comparisons and performance metrics.
- This audience can use the insights for player scouting, team strategy, and performance optimization.
- They would appreciate both broad trends and granular details in the data.
- The financial aspects (player value and wages) are particularly relevant to this group for budget planning and player acquisition strategies.

Visualizations:

Average Wage by Age



Steps to Create the Visualization:

- Data preparation: Filtering player ages to include only those between 16 and 40 years, excluding players above 40 due to their wages being less than 5000 euros.
- Chart creation:
 - Placing 'Age' on the Columns shelf and average 'Eur_Wage' on the Rows shelf
 - Applying an age filter (16-40 years)
 - Adding a reference line for the overall average wage
 - Incorporating a trend line to show general wage progression
 - Creating a forecast to compare with actual data
- Enhancing readability: Adding data labels for specific points of interest (e.g., Age 19 and Age 35)

2. Description of the Visualization:

The line chart titled "Average Wage by Age" for soccer players. The x-axis represents the player's age (16-44 years), while the y-axis shows average wages in thousands of euros (0-140K). The primary blue line represents actual data, showing average wage fluctuations across ages. A dashed trend line indicates the overall wage progression and a light blue area represents the forecast with confidence intervals. Two specific data points are highlighted: Age 19 (Average Wage: €57.20K) and Age 35 (Average Wage: €119.25K).

3. Storytelling for the Target Audience (Sports Analysts):

This visualization offers crucial insights for sports analytics professionals:

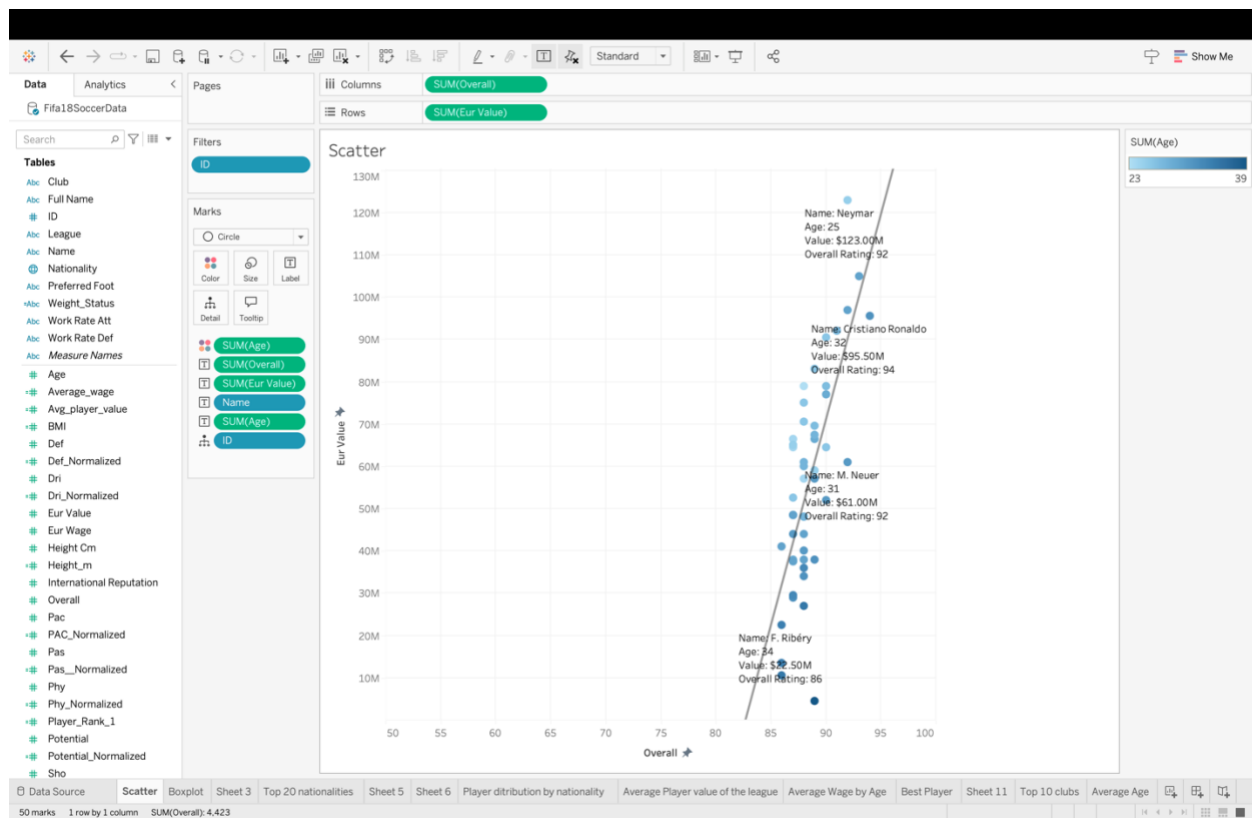
- **Career Progression:** The chart illustrates how a soccer player's value typically evolves throughout their career. We see a sharp increase in average wages, suggesting rapid skill development and increasing market value during this period.
- **Peak Earning Age:** The data indicates that players reach their peak earning potential in their late 20s to early 30s, which aligns with when many players are considered to be in their prime.
- **Wage Decline:** After the peak, there's a gradual decline in average wages, likely reflecting the perceived diminishing physical capabilities of older players.
- **Youth Development:** The relatively low average wage at age 19 (€57.20K) underscores the potential value in developing young talent as their wages increase rapidly in subsequent years.

4. Design Methodologies and Audience Considerations:

The visualization effectively employs several design principles tailored for the sports analytics audience:

- **Gestalt Principle of Continuity:** The continuous line chart guides the viewer's eye along the wage progression, making it easy to follow the overall trend.
- **Proximity:** Related elements (actual data, trend line, and forecast) are grouped closely, allowing for quick comparisons.
- **Color Coding:** Different colors distinguish between actual data (dark blue), the trend line (dark dashed), and the forecast (light blue), enhancing clarity for the audience.
- **Data Highlighting:** Specific age points are labeled, drawing attention to key career stages relevant to analytics professionals.
- **Simplicity:** The clean design, without unnecessary embellishments, caters to the analytical nature of the target audience.
- **Interactivity:** The presence of filter options suggests the ability to manipulate data, appealing to the hands-on nature of analytics professionals.

Player Value vs. Overall Rating



1. Steps to Create the Visualization:

- Data preparation: Filtering to include only top-rated players (Overall rating > 85).
- Scatter plot creation:
 - Placing 'Overall' rating on the Columns shelf
 - Placing 'Eur_Value' (in millions) on the Rows shelf
 - Adding 'ID' to Detail in the Marks card for individual data points
 - Using 'Age' for Color in the Marks card
 - Including 'Name,' 'Age,' 'Overall Rating,' and 'Value' in data point labels
 - Adding a trend line to show the general relationship
- Enhancing readability: Formatting labels for clarity and highlighting specific players of interest

2. Description of the Visualization:

This scatter plot visualizes the relationship between elite soccer players' overall ratings (x-axis, 50-100 scale) and their market values (y-axis, 0-130M euros). Each point represents a player, with color indicating age (darker blue for older players, lighter blue for younger). A trend line shows the general correlation between rating and value. Key players like Neymar, Cristiano Ronaldo, M. Neuer, and F. Ribéry are labeled with their age, value, and overall rating. The plot focuses on the top 50 players with overall ratings above 85, representing the sport's elite tier.

3. Storytelling for the Target Audience (Sports Analysts):

For sports analytics professionals, this visualization offers critical insights into the soccer transfer market:

- **Value-Rating Correlation:** There's a strong positive correlation between a player's overall rating and their market value, as evidenced by the upward trend line.

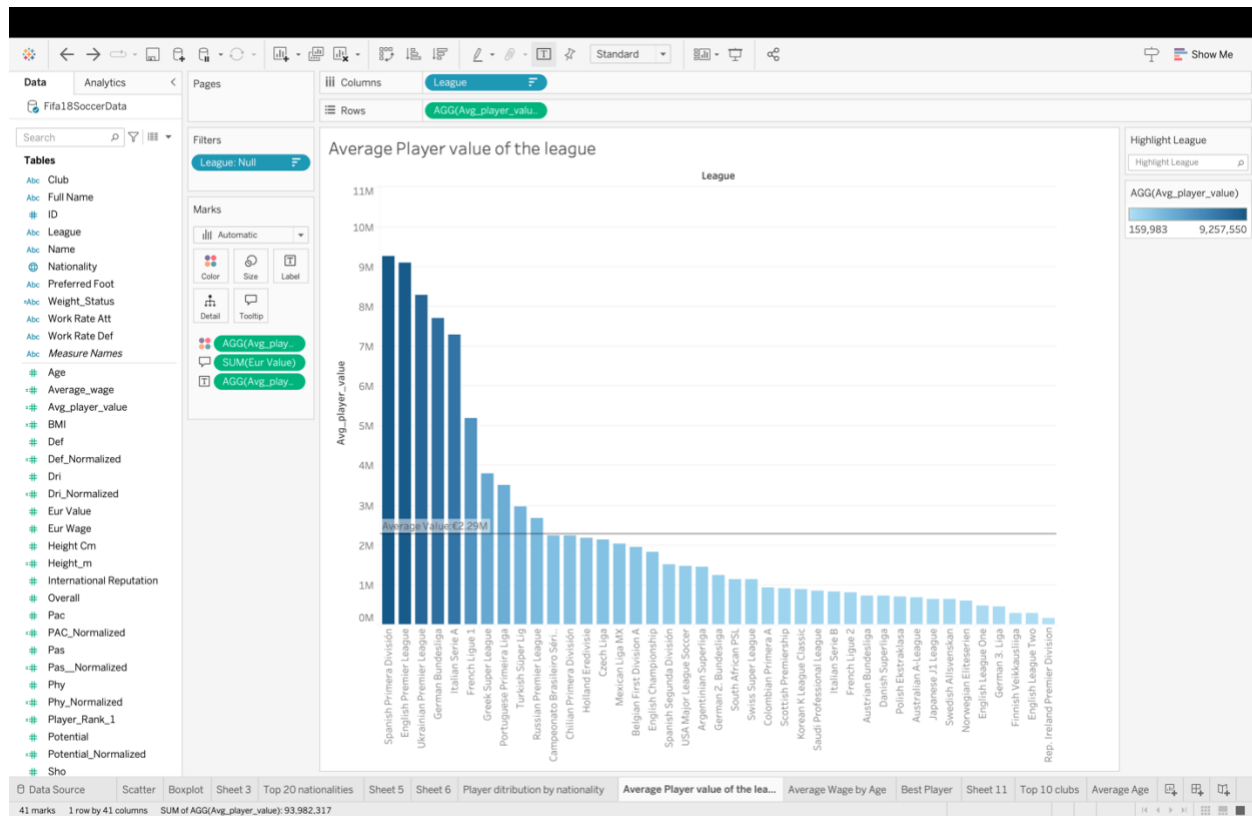
- **Age Impact:** Younger players (lighter blue) tend to have higher values relative to their ratings, suggesting a premium on potential and longevity. For instance, 25-year-old Neymar commands the highest value (€123.0M) despite not having the highest rating. Cristiano Ronaldo, despite his high rating (94) and age (32), maintains an extremely high value (€95.5M) and is still not the most valuable player because of his age. This emphasizes how age plays a crucial role in determining a player's value.
- **Peak Performance Window:** The cluster of high-value players (above €60M) falls primarily in the 85-95 overall rating range and lighter blue color spectrum, indicating that peak value often aligns with players in their mid-20s to early 30s.

4. Design Methodologies and Audience Considerations:

The visualization employs several design principles tailored for the sports analytics audience:

- **Gestalt Principle of Similarity:** Age-based color-coding groups players visually, allowing quick identification of value patterns across age groups.
- **Proximity:** Clustering of data points helps identify trends and outliers in specific rating ranges.
- **Continuity:** The trend line guides the eye, emphasizing the overall relationship between rating and value.
- **Interactive Elements:** Visible filter options suggest the ability to drill down into specific subsets of players.
- **Highlighting:** Key players are labeled, drawing attention to notable data points and potential discussion starters.

Comparative Analysis of Average Player Market Value Across Leagues



1. Steps to Create the Visualization:

a) Data preparation:

- Creating a calculated field "Avg_player_value" to represent the average player value per league
- Filtering player records to include only those in recognized leagues

b) Bar chart creation:

- Placing 'League' on the Columns shelf
- Placing 'AGG(Avg_player_value)' on the Rows shelf
- Sorting bars in descending order of average value
- Applying a color gradient (dark to light blue) to emphasize value differences

c) Enhancing readability:

- Adding a reference line for the overall average player value (€2.29M)
- Including data labels for precise value representation
- Implementing an interactive highlight feature for specific leagues

2. Description of the Visualization:

This bar chart displays the average player market value across various soccer leagues globally. The x-axis lists individual leagues, while the y-axis represents the average player value in millions of euros (0M to 11M). Each bar represents a league, with its height indicating the average player value. The bars are sorted in descending order, allowing for quick comparison. A color gradient from dark to light blue visually reinforces the value hierarchy. A reference line at €2.29M marks the overall average player value across all leagues. The chart includes an interactive feature to highlight specific leagues and their corresponding values.

3. Storytelling for the Target Audience (Sports analysts):

For sports analysts, this visualization offers valuable insights into global soccer market dynamics:

- **League Value Hierarchy:** The chart clearly illustrates the significant disparity in average player values across leagues. The top leagues (e.g., Spanish Primera División, English Premier League) have average player values nearly three times higher than the overall average, indicating concentrated talent and financial power.
- **Elite League Cluster:** The top 5-6 leagues show markedly higher average values, forming an elite tier. This suggests a potential "big league" effect where top talent and financial resources are concentrated.
- **Mid-tier Leagues:** A substantial middle group of leagues hover around the €2.29M average, representing potential sources of undervalued talent for top clubs or destinations for players seeking more playing time.
- **Value Gaps:** The visualization reveals significant value gaps between tiers of leagues, which could indicate differing levels of competitiveness, financial resources, or player development capabilities.
- **Scouting Opportunities:** Lower-ranked leagues with surprisingly high average values might represent untapped talent pools for savvy scouts and analysts.

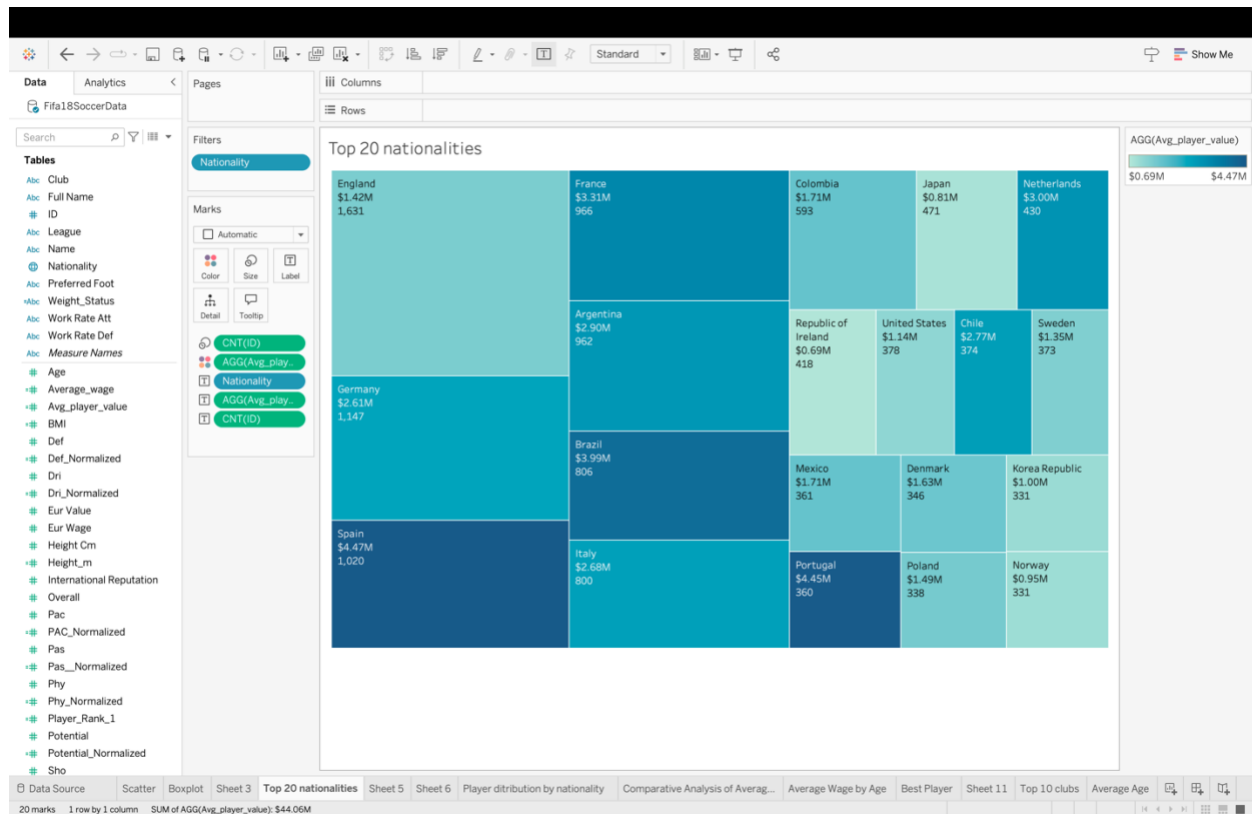
4. Design Methodologies and Audience Considerations:

The visualization employs several design principles tailored for the sports analytics audience:

- **Gestalt Principle of Similarity:** The consistent use of blue hues groups the leagues visually, allowing for quick comparison within the same dataset.
- **Proximity:** Bars are placed close to each other, emphasizing they're part of the same comparative analysis.
- **Continuity:** The descending order of bars guides the eye naturally from highest to lowest values.
- **Color Encoding:** The gradient from dark to light blue reinforces the value hierarchy, aiding quick visual assessment.
- **Interactive Elements:** The ability to highlight specific leagues allows for a detailed exploration of the data.
- **Reference Line:** The average value line provides context and a quick benchmark for assessing leagues.
- **Clear Labeling:** Axis labels and league names are easily readable, catering to the need for precise information in analytics.

This visualization effectively communicates complex market value data across global soccer leagues in a format that's both insightful and accessible to sports analytics professionals. It enables quick identification of value disparities, potential scouting opportunities, and broader market trends, serving as a valuable tool for strategic decision-making in player acquisition and league analysis.

Global Soccer Talent Distribution: Top 20 Nationalities by Player Count and Average Value



1. Steps to Create the Visualization:

a) Data preparation:

- Filtering to include only the top 20 nationalities based on player count
- Creating a calculated field for "Avg_Player_Value"

b) Treemap creation:

- Placing 'Nationality' on Text in the Marks card
- Using Count Distinct of 'ID' for Size
- Applying "Avg_Player_Value" to Color
- Selecting the treemap option from 'Show Me'

c) Enhancing readability:

- Applying a sequential color palette based on average player value
- Adding labels for Nationality, Avg_Player_Value, and Count(ID)
- Arranging rectangles to loosely group nations by continent

2. Description of the Visualization:

This treemap visualizes the distribution of soccer players across the top 20 nationalities. Each rectangle represents a country, with its size proportional to the number of players and its color indicating the average player value. The layout roughly groups countries by continent. Each rectangle displays the country name, average player value (in millions), and the number of players. The color scale ranges from light blue (lower average value) to dark blue (higher average value). Countries like Spain, England, and France stand out with larger sizes and darker colors, indicating both high player counts and high average values.

3. Storytelling for the Target Audience (Sports Analytics Industry):

For sports analytics professionals, this visualization offers crucial insights into global soccer talent distribution:

- Talent Concentration: England, with 1,631 players and an average value of \$1.42M, leads in quantity but not in average value. This suggests a deep talent pool with varying quality levels.
- Value Hotspots: Spain stands out with the highest average player value (\$4.47M) and a large player base (1,020), indicating a concentration of high-quality talent.
- Emerging Markets: Countries like Colombia and Mexico show significant player numbers with moderate average values, potentially representing untapped talent pools.
- Quality vs. Quantity: France and Germany balance high player counts with strong average values, suggesting well-developed soccer infrastructures.
- Japan's presence in the top 20 with a relatively high average value (\$0.81M) could indicate an emerging market for talent acquisition or partnership opportunities.

This data can inform scouting strategies, market analysis, and long-term talent development plans for clubs and national organizations.

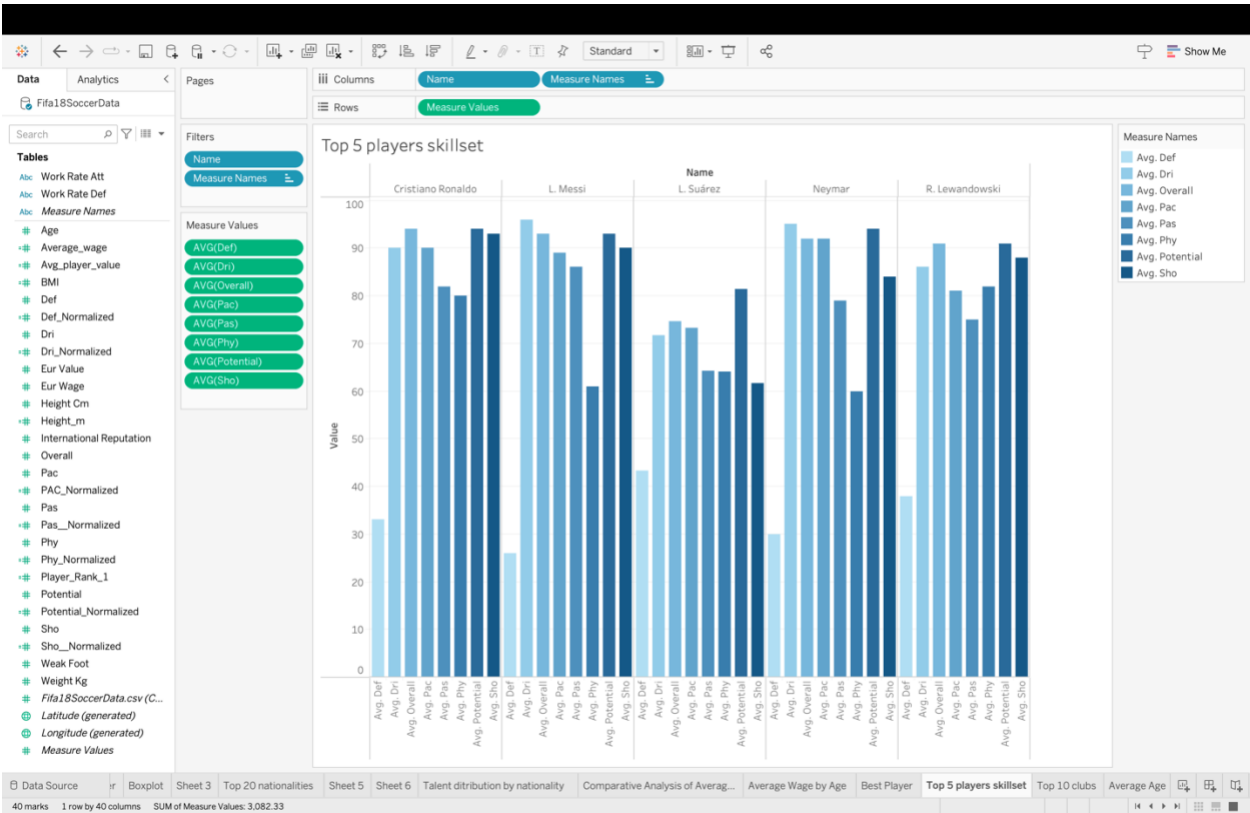
4. Design Methodologies and Audience Considerations:

The visualization employs several design principles tailored for the sports analytics audience:

- Gestalt Principle of Proximity: The loose grouping of countries by continent allows for quick regional comparisons.
- Color Encoding: The sequential color palette effectively communicates value differences, with darker blues instantly drawing attention to high-value markets.
- Hierarchical Structure: The treemap's nested structure allows for quick comparison of relative importance across multiple dimensions.
- Labeling: Clear, concise labels provide precise data points, catering to the analytics professional's need for accuracy.
- Interactivity: The 'Highlight' feature (visible in the interface) suggests the ability to focus on specific countries for detailed analysis.
- Consistency: Uniform color scheme and labeling format across all rectangles aid in quick data interpretation.

This visualization effectively communicates complex data about global soccer talent distribution in a format that's both insightful and accessible to sports analytics professionals.

Elite Player Skill Profile: Comparative Analysis of Top 5 FIFA 18 Stars



1. Steps to Create the Visualization:

- Data was filtered, focusing on the top 5 players.
- Skills measured include Defense (Def), Dribbling (Dri), Overall rating, Pace (Pac), Passing (Pas), Physical (Phy), Potential, and Shooting (Sho).
- A grouped bar chart was created in Tableau, with players on the x-axis and skill ratings on the y-axis.
- skill was assigned a color for easy comparison across players.
- Player names were added as labels above their respective skill sets.

2. Description of the Visualization:

This grouped bar chart compares the skill ratings of the top 5 players in FIFA 18: Cristiano Ronaldo, L. Messi, L. Suárez, Neymar, and R. Lewandowski. Each player's skills are represented by a group of colored bars, with each color corresponding to a specific skill attribute. The y-axis shows the skill rating from 0 to 100, allowing for a direct comparison of skill levels across players and attributes.

3. Storytelling for the Target Audience (Sports Analysts):

For sports Analyst professionals, this visualization offers a comprehensive view of elite player capabilities, which is crucial for strategic team building and player valuation. Messi and Ronaldo stand out with exceptionally high overall ratings and balanced skill sets, explaining their dominance in the sport. Neymar excels in dribbling and pace, making him a formidable attacking threat. Suárez shows strong shooting and physical attributes, ideal for a center-forward role. Lewandowski's high shooting skill, coupled with good overall and potential ratings, suggests he's a prime target for teams seeking a reliable goal-scorer. This data is invaluable for talent scouts and team managers in assessing player strengths and potential team fit.

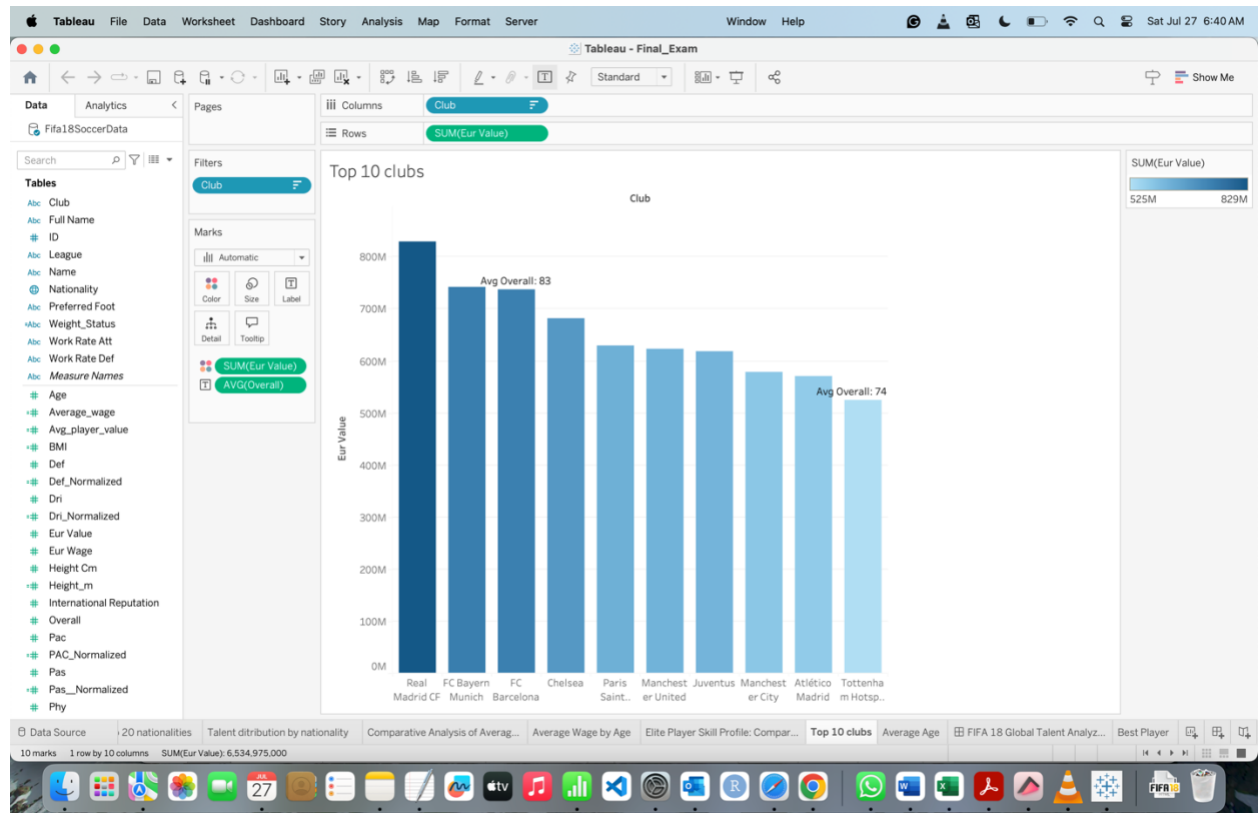
4. Design Methodologies and Audience Considerations:

The visualization employs several Gestalt principles to enhance comprehension for the sports analytics audience:

- Similarity: Consistent color coding across players allows quick comparison of specific skills.
- Proximity: Grouping bars for each player facilitates easy overall player assessment.
- Figure-Ground: Clear contrast between bars and background ensures data visibility.
- Continuity: The alignment of bars guides the eye across different attributes for each player.

This visualization serves as a powerful tool for sports analytics professionals, offering a clear, comparative view of top player attributes, essential for informed decision-making in player recruitment, team strategy, and performance analysis.

Top 10 Soccer Clubs by Total Player Value: Insights for Sports Analytics



1. Steps to Create the Visualization:

- Data preparation: Filter and aggregate FIFA 18 player data by club
- Created calculated fields: SUM(Eur Value) for total club value, AVG(Overall) for average player rating
- Set up bar chart:
 - Placed 'Club' on Columns shelf
 - Placed SUM(Eur Value) on the Rows shelf
 - Sort bars in descending order of total value
- Add color gradient: Apply blue color palette from dark (highest value) to light (lowest value)
- Incorporated average player rating:
 - Added AVG(Overall) to Detail in Marks card
 - Added labels to specific bars (e.g., highest and lowest)

2. Description of the Visualization:

The bar chart displays the top 10 soccer clubs ranked by their total player value in euros. Each bar represents a club, with its height indicating the total value of all players in that club. The clubs are sorted in descending order, with Real Madrid CF at the top and Tottenham Hotspur at the bottom. A blue color gradient is applied, with darker shades for higher-valued clubs. Two clubs have additional labels showing their average overall player rating: Real Madrid CF (83) and Tottenham Hotspur (74).

3. Storytelling for the Target Audience (Sports Analysts):

For sports Analysts, this visualization offers crucial insights into the financial and talent distribution among top soccer clubs. Real Madrid CF stands out with a staggering total player value of nearly 800 million euros, significantly higher than the other clubs. This suggests they have invested heavily in acquiring and developing top talent. The gradient from Real Madrid to Tottenham Hotspur illustrates the substantial value gap even among elite clubs, with Tottenham's total value being less than half of Real Madrid's. Interestingly, while Real Madrid boasts both the highest total value and a high average player rating of 83, Tottenham manages to stay in the top 10 despite a lower average rating of 74. This could indicate different strategies in talent acquisition and development among these clubs, providing valuable information for analysts involved in player valuation, transfer market strategies, and competitive analysis.

4. Design Methodologies and Audience Considerations:

The visualization employs several design principles tailored for the sports analytics audience:

- Gestalt Principle of Similarity: The consistent use of blue hues groups the clubs visually, allowing for quick comparison within the same dataset.
- Proximity: Bars are placed close to each other, emphasizing they're part of the same comparative analysis.
- Continuity: The descending order of bars guides the eye naturally from highest to lowest values.
- Color Encoding: The gradient from dark to light blue reinforces the value hierarchy, aiding quick visual assessment.

This visualization serves as an effective tool for sports analytics professionals, offering a clear, comparative view of top club valuations and player quality, essential for informed decision-making in player recruitment, financial analysis, and competitive benchmarking.

Dashboard

Title: FIFA 18 Global Talent Analyzer: Wages, Values, and National Distributions



Dashboard Overview and Visual Selection

This comprehensive dashboard offers a deep dive into FIFA 18's player data, designed for sports analytics professionals seeking insights into global soccer talent. The visuals were carefully chosen to provide a multi-faceted view of the player landscape:

- The "Average Wage by Age" chart illustrates career earnings progression, highlighting key periods like the €57.20K average at age 19 and peaking at €128.33K at age 35. This visual is crucial for understanding player value over time and informing long-term investment strategies.
- The scatter plot of "Player Value vs. Overall Rating" reveals the complex relationship between player ratings, age, and market value, with standout players like Neymar and Cristiano Ronaldo visible. This helps identify undervalued or overvalued players in the market.
- The "Comparative Analysis of Average Player Market Value Across Leagues" bar chart exposes significant value disparities between top leagues and potential scouting opportunities in less prominent competitions, essential for talent acquisition strategies.

- The "Top 20 Nationalities" treemap provides a macro view of talent distribution, showing countries like England and Germany leading in player count, while others like Spain boast high average player values. This is invaluable for international scouting and market analysis.

Dashboard Design and Interactivity

The dashboard's design adheres to key principles:

- Consistency: A uniform color scheme creates visual cohesion across all charts.
- Layout: The arrangement guides viewers from broad trends to specific player analyses, following a logical narrative flow.
- Clear Labeling: All elements are clearly labeled to ensure easy interpretation without overwhelming the user.
- Varied Chart Types: The use of line, scatter, bar, and treemap charts caters to different data aspects while maintaining visual engagement.
- White Space: Judicious use of space prevents information overload and enhances readability.

Interactive elements enhance the dashboard's utility:

- The Nationality filter allows users to focus on specific countries across all visualizations, enabling targeted analysis.
- The Overall Rating filter, applicable to the wage, scatter plot, and best player sections, lets analysts hone in on elite talent or explore specific skill tiers.
- The `country_action_filter`, triggered from the Top 20 Nationalities treemap, offers an intuitive way to drill down into national data while maintaining the broader context.

Dashboard Story

Dashboard Creation Process: The dashboard was created using the following steps,

- Data Preparation: Cleaned and structured the FIFA 18 dataset and created calculated fields (e.g., average player value per league).
- Individual Visualizations: Developed each chart for clarity and insight.
- Dashboard Layout: Arranged visualizations logically to tell a story about global soccer talent.
- Interactivity Implementation: Added filters and action items for dynamic data exploration.
- Design Refinement and Testing: Applied consistent formatting, colors, and labeling; tested with sample user scenarios and refined based on feedback.

Insights and Audience Considerations:

- Identified peak earning ages and career progression patterns for soccer players.
- Analyzed relationships between player ratings, age, and market value.
- Highlighted significant value disparities between leagues, indicating potential market inefficiencies.

The dashboard targets sports analytics professionals, providing both broad overviews and detailed interactive elements for in-depth analysis.

Challenges Encountered:

- Balanced detail with an overview in limited dashboard space.
- Ensured effective and accessible color schemes.
- Implemented interactive features that enhanced user experience without complication.

Outcomes and Learnings:

Developed skills in creating cohesive, interactive dashboards for complex datasets. Gained insights into effective data storytelling for sports analytics and identified areas for further analysis, such as predictive modeling of player value trajectories. The FIFA 18 Global Talent Analyzer dashboard demonstrated the power of visual analytics in distilling complex sports data into actionable insights and highlighted the importance of user-centric design. This enables sports analytics professionals to make data-driven decisions impacting team composition, scouting strategies, and financial planning in professional soccer.