

DASHBOARD IMPLEMENTATION

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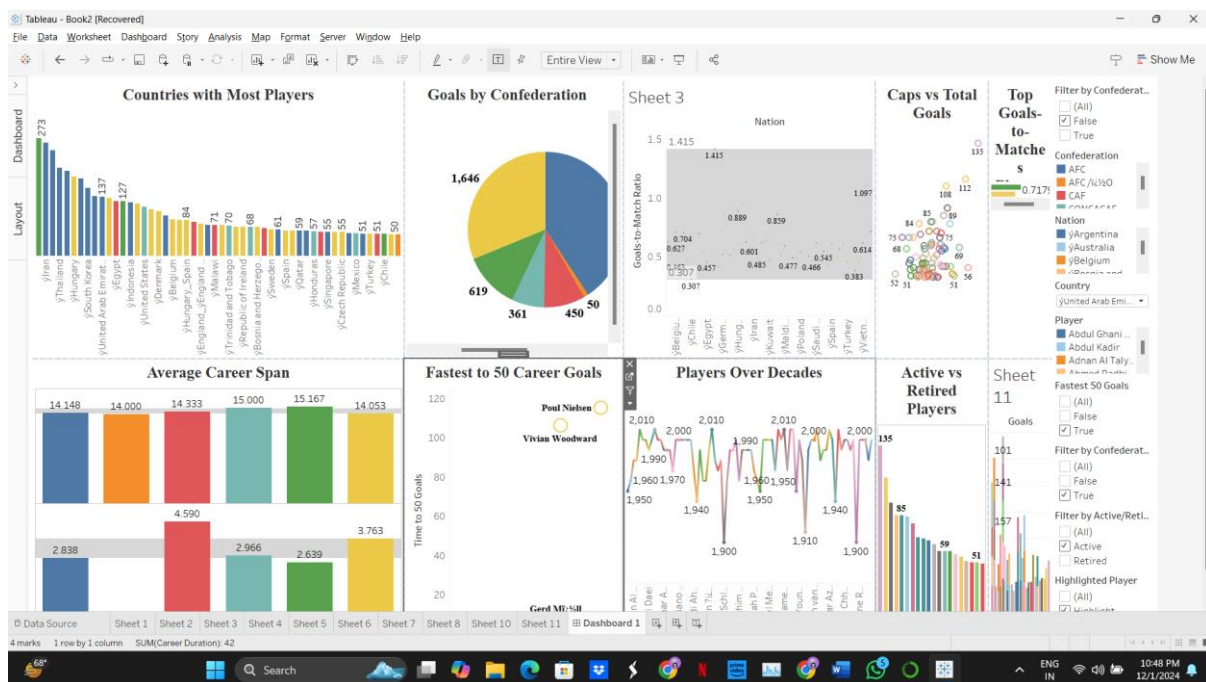
DATA VISUALIZATION & REPORTING

DATE: DECEMBER 01, 2024

SECTION 1: THE DASHBOARD

THE FINAL DASHBOARD

This dashboard offers a detailed study of male footballers who have scored 50 or more goals in international competitions. It highlights crucial findings such as the countries with the most prolific players, goal distribution throughout football confederations, and player efficiency as measured by goals-to-match ratios. The dashboard also looks at these players' typical career spans, determines the fastest players to score 50 goals, and investigates trends in player performance over time. It also distinguishes between active and retiring players, providing a balanced perspective on historical figures and contemporary stars. Overall, it's an effective tool for studying and comparing elite footballers' career achievements across nations, confederations, and eras.



SECTION 2: THE DATASET

This dataset contains specific information about male football players who have scored 50 or more goals in their international careers. It contains 82 records and includes crucial information such as the player's name, country, and the governing football confederation in which they compete. The information also includes performance measures such as total goals scored, number of international appearances (caps), goals per match, and the length of their international career. It also notes the precise day on when each player scored their 50th international goal and ranks them based on the total amount of goals scored.

For pre-processing, numerical data such as goals, caps, and goals per match were normalized to ensure scale consistency, which is required for reliable similarity calculations. Categorical attributes, such as confederations, were one-hot encoded to provide a numerical format suitable for machine learning techniques. This pre-processing stage made the dataset more compatible with collaborative filtering approaches, which were then used to identify and recommend players with similar profiles based on performance and career characteristics.

SECTION 3: DASHBOARD USERS

The dashboard is a helpful tool for many users, who use its features to acquire insights tailored to their unique interests.

Sports Analyst: Sports analysts can use the dashboard to examine elite players' performance trends over time, detecting periods of peak performance and consistent scoring across multiple games. This data is especially valuable for analysing regional strengths and understanding the trends of various confederations.

Football enthusiasts: Football enthusiast can utilize the dashboard to compare famous players, based on milestones, goal-scoring efficiency, and career longevity. For example, supporters may compare Lionel Messi's and Cristiano Ronaldo's careers, prompting lively disputes.

Sports journalists: Sports Journalist benefit from the dashboard because it provides visual data that highlights major achievements and generational comparisons, allowing them to tell fascinating tales about rivalries, records, and regional domination.

Coaches and Scouts: Coaches and scouts can examine the characteristics that define high-scoring players and use this information to establish benchmarks for existing athletes or find emerging talent with comparable potential.

Fans: Fans can use the dashboard to commemorate the accomplishments of their favourite players and countries, revisiting landmarks such as the 50th goal and studying worldwide player rankings in an interesting, interactive way.

SECTION 4: QUESTIONS

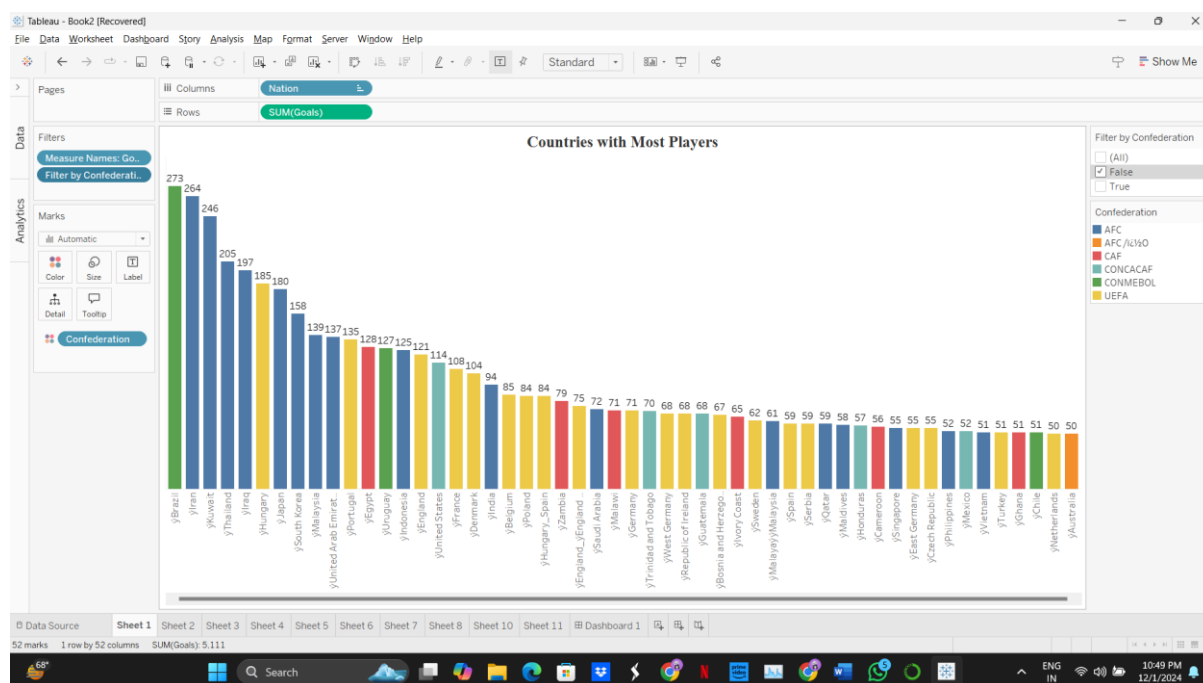
1. Which country has the most players with 50+ goals?
2. Which confederation dominates in terms of goals scored?
3. How does the goals-to-matches ratio vary across countries?
4. What is the average career span of players across confederations?
5. Which players scored 50 goals in the shortest time span?
6. How have the number of players reaching 50+ goals changed over the decades?
7. Which player has the highest goals-to-match ratio?
8. Are there patterns in milestone achievements based on age or career stage?
9. How does scoring distribution differ between active and retired players?
10. What is the relationship between caps and total goals scored?

SECTION 5: PLOTS

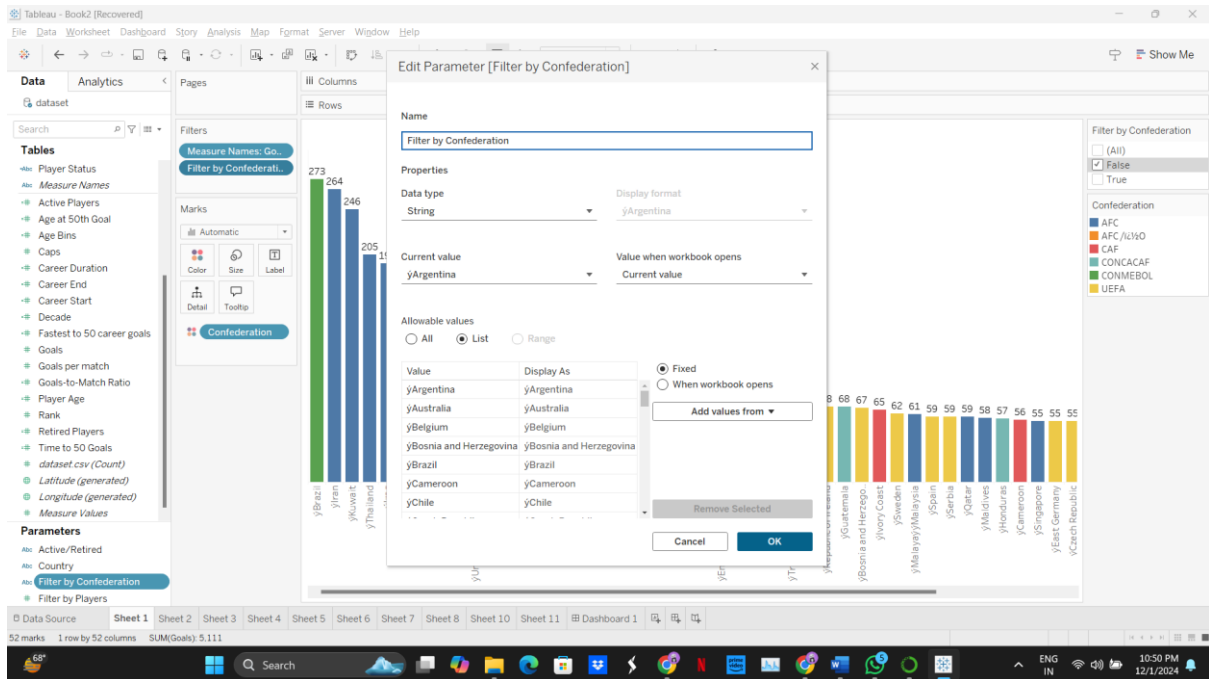
Sheet 1: Countries with Most Players

Question Addressed: Which country has the most players with 50 or more international goals?

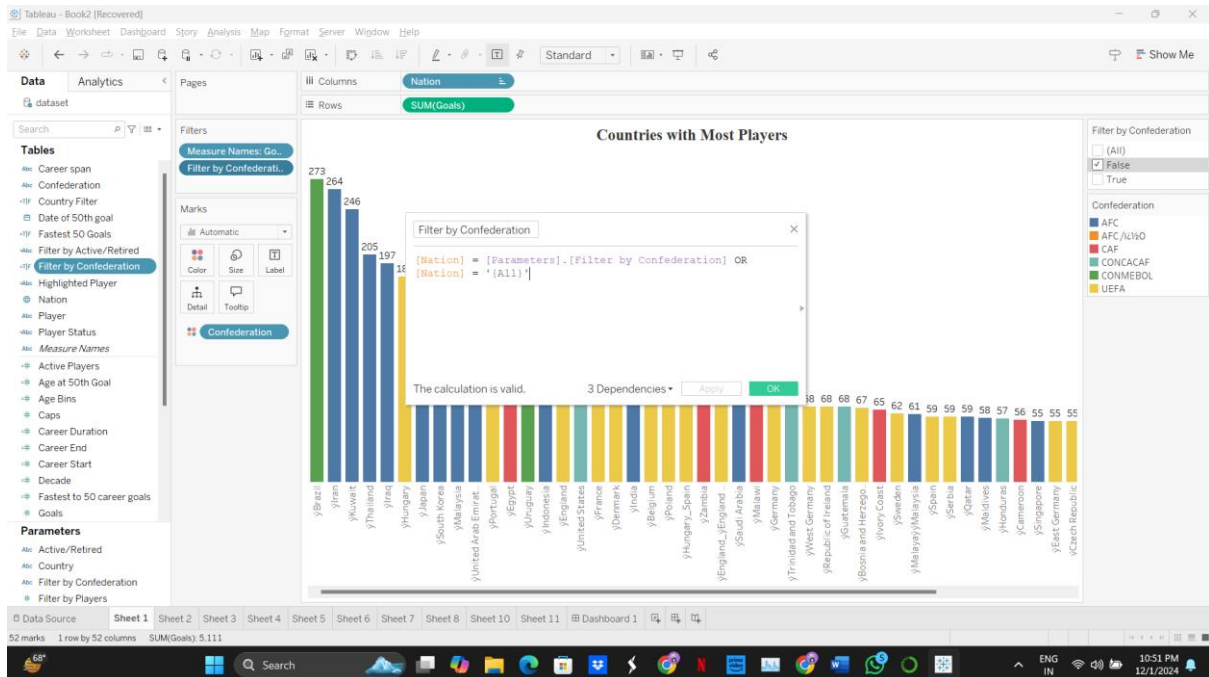
Explanation: A bar chart shows countries and the number of players who have reached this milestone. It highlights nations with good individual performances, allowing for country-specific comparisons of player contributions.



Parameter



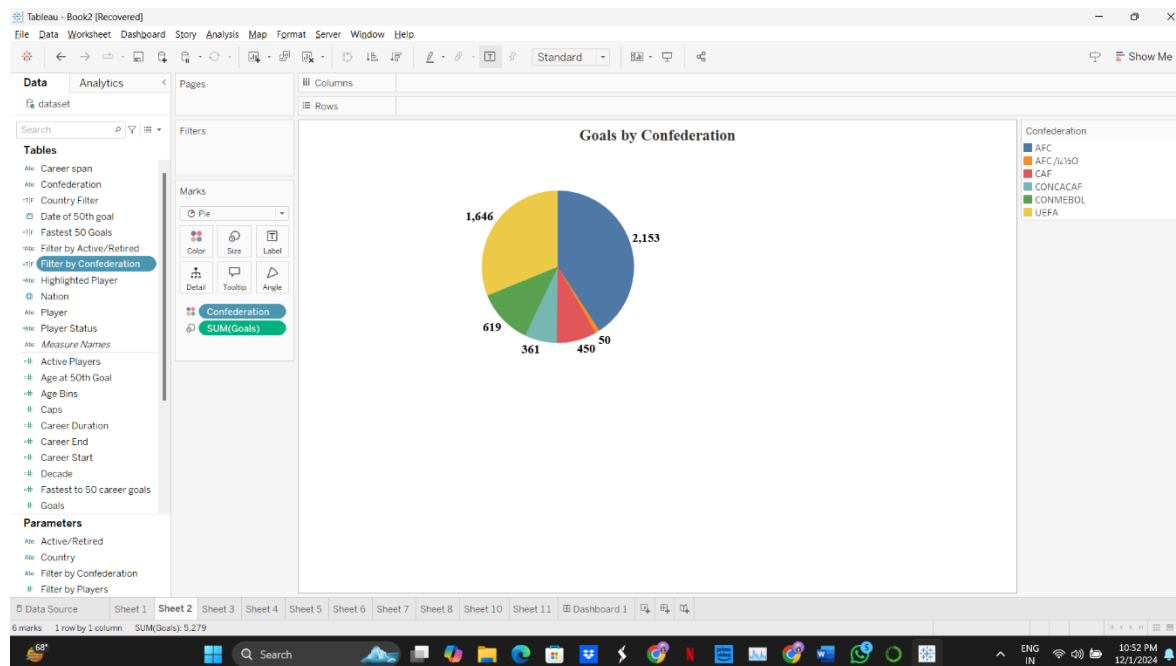
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Sheet 2: Goals by Confederation

Question Addressed: Which confederation leads in terms of goals scored?

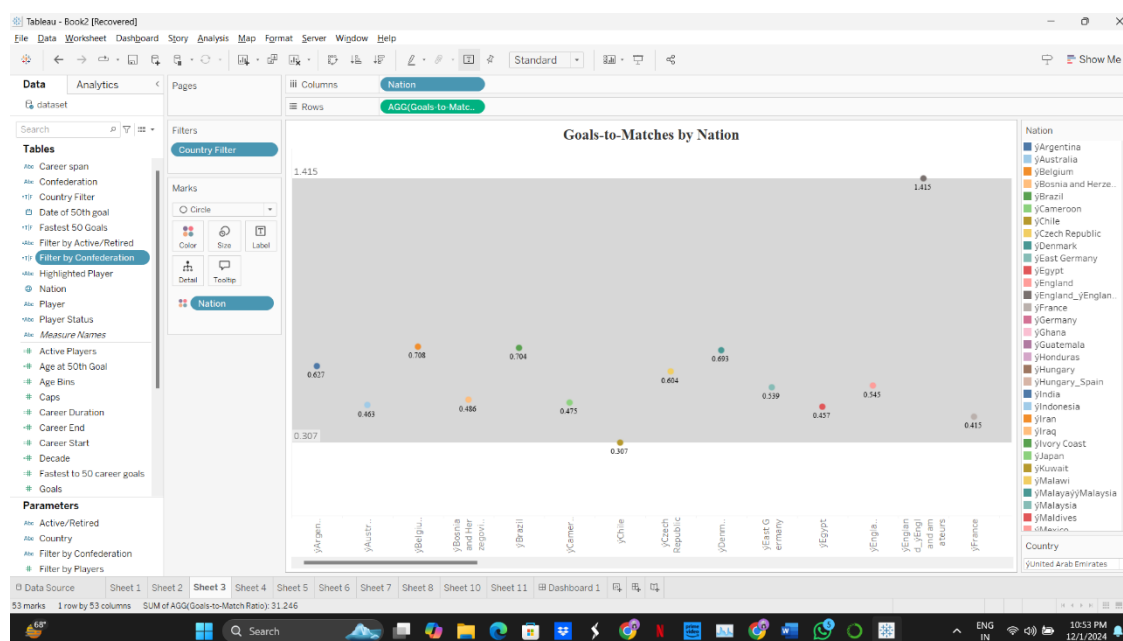
Explanation: A pie chart depicts the distribution of total goals across confederations, demonstrating regional dominance in international football.



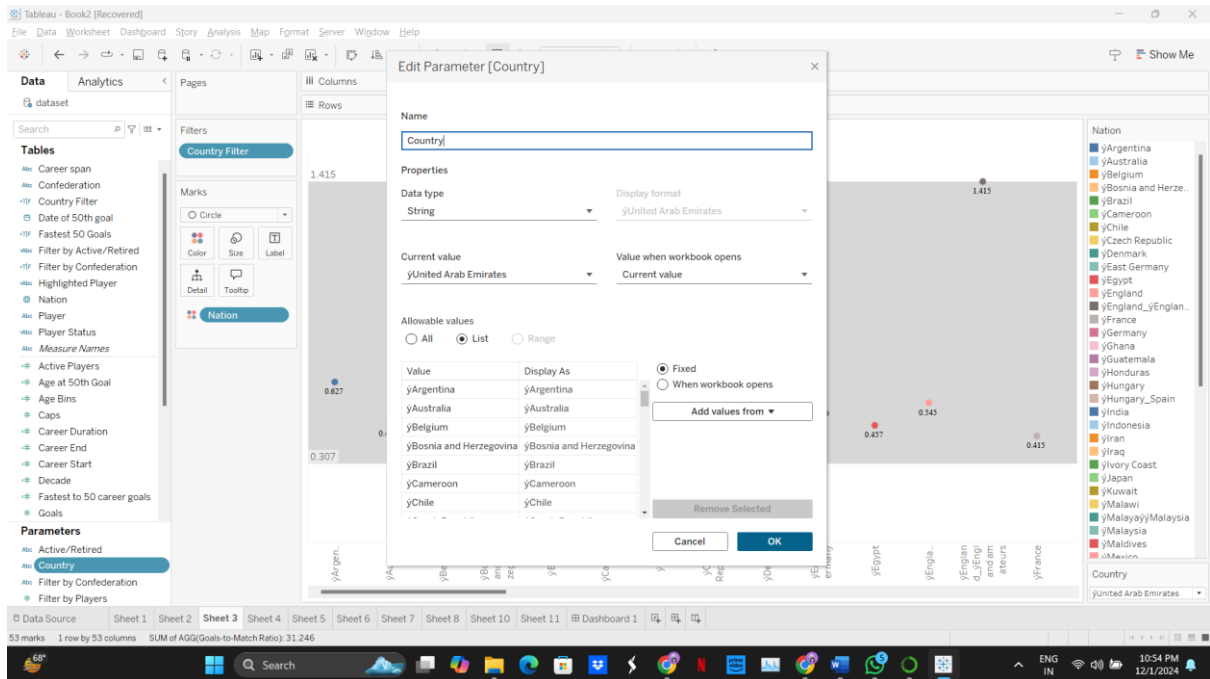
Sheet 3: Goals-to-Match by Nation

Question Addressed: How does the goals-to-matches ratio differ between countries?

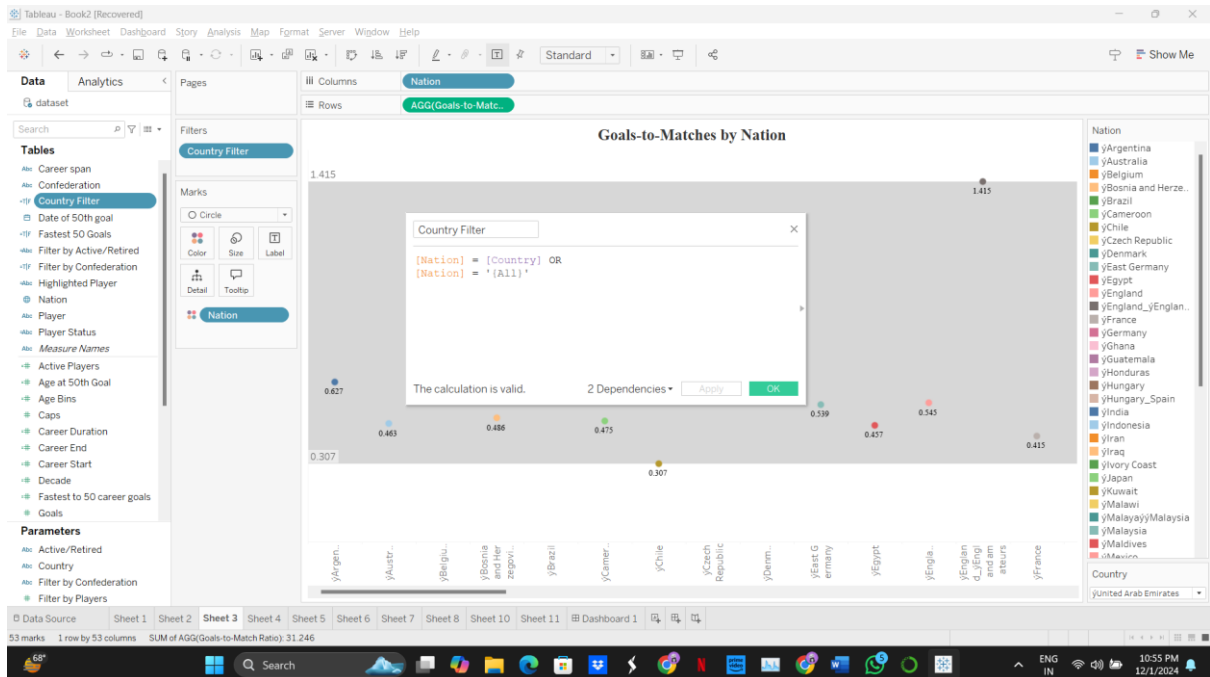
Explanation: A scatter plot compares countries' goals-to-match ratios. This aids in comparing player efficiency between nations.



Parameter Created



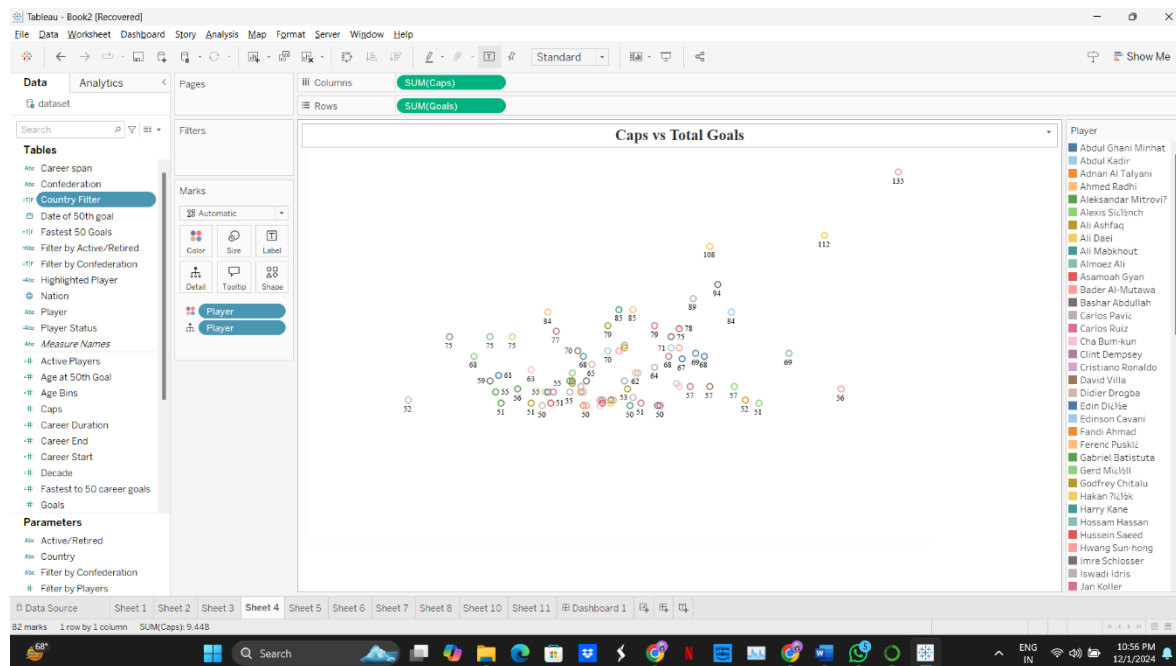
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Sheet 4: Caps vs Total goals

Question Answered: What is the correlation between caps and total goals scored?

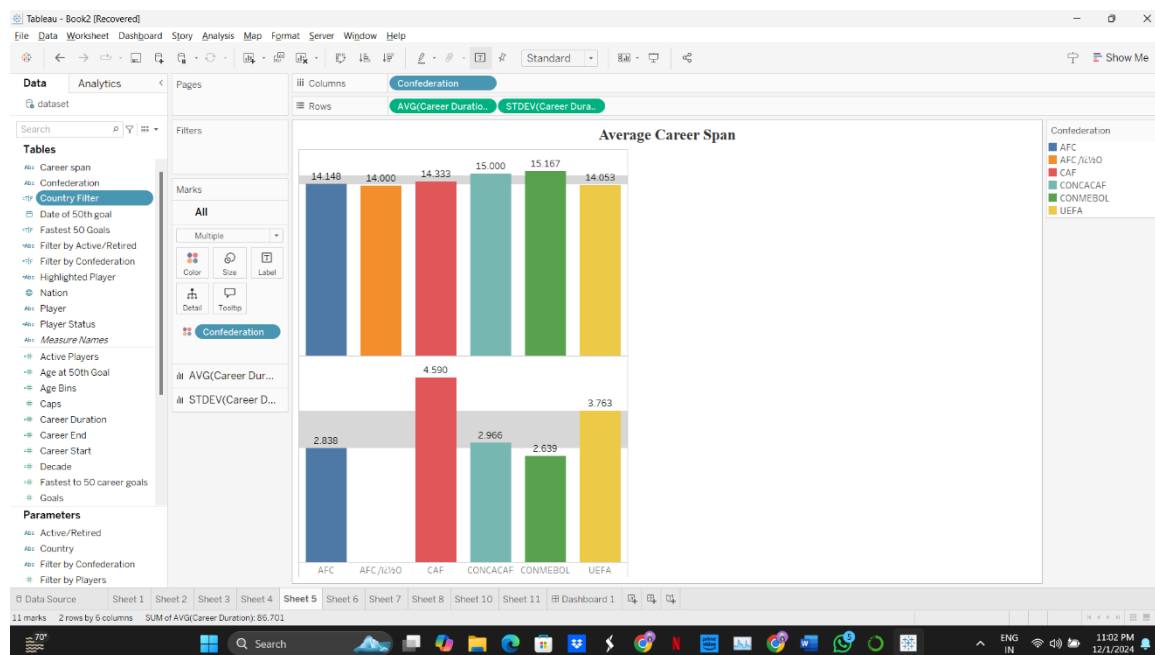
Explanation: A scatter plot depicts the relationship between caps (appearances) and total goals, allowing you to determine if frequent appearances convert into greater goal tallies.



Sheet 5: Average Career Span

Question Addressed: What is the average career span of players from different confederations?

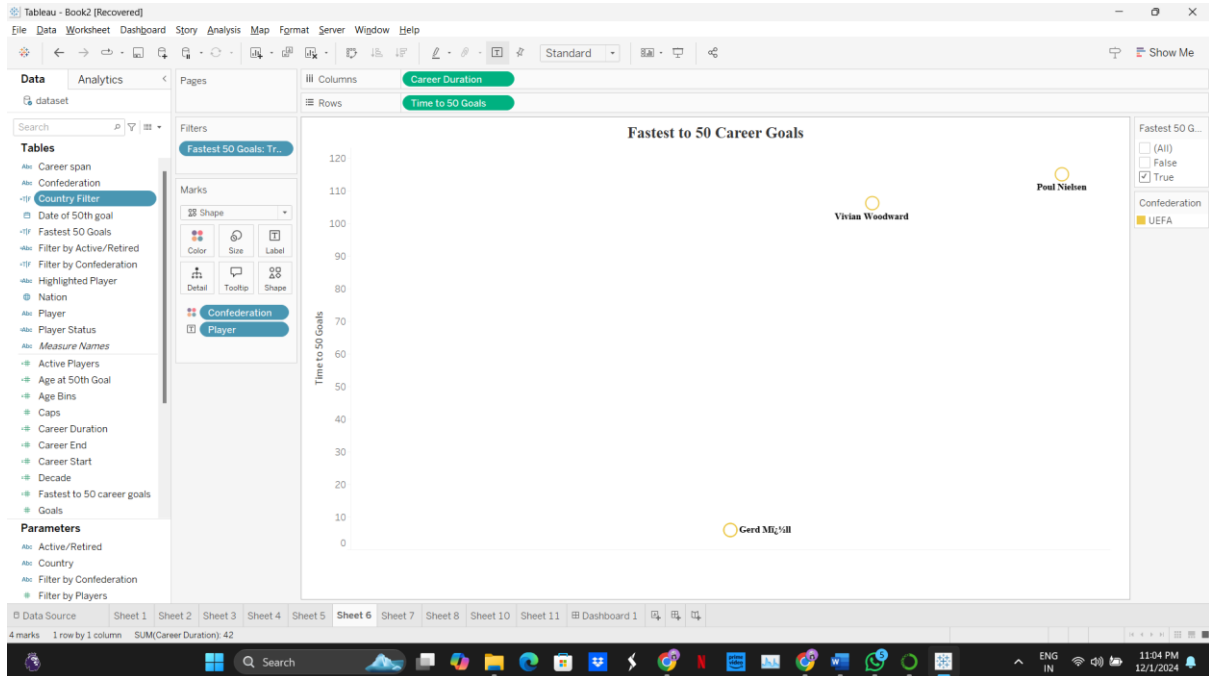
Explanation: A bar chart shows the average career duration of footballers, highlighting disparities amongst confederations.



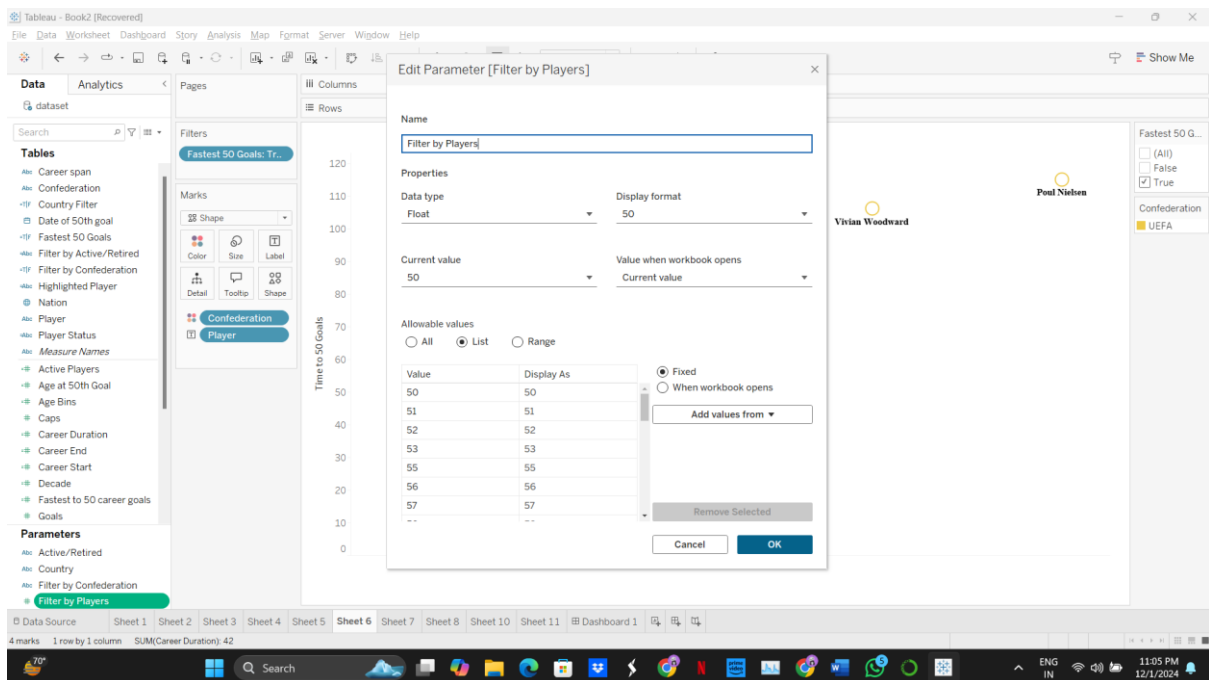
Sheet 6: Fastest to 50 Career Goals

Question: Which players achieved 50 goals in the least amount of time?

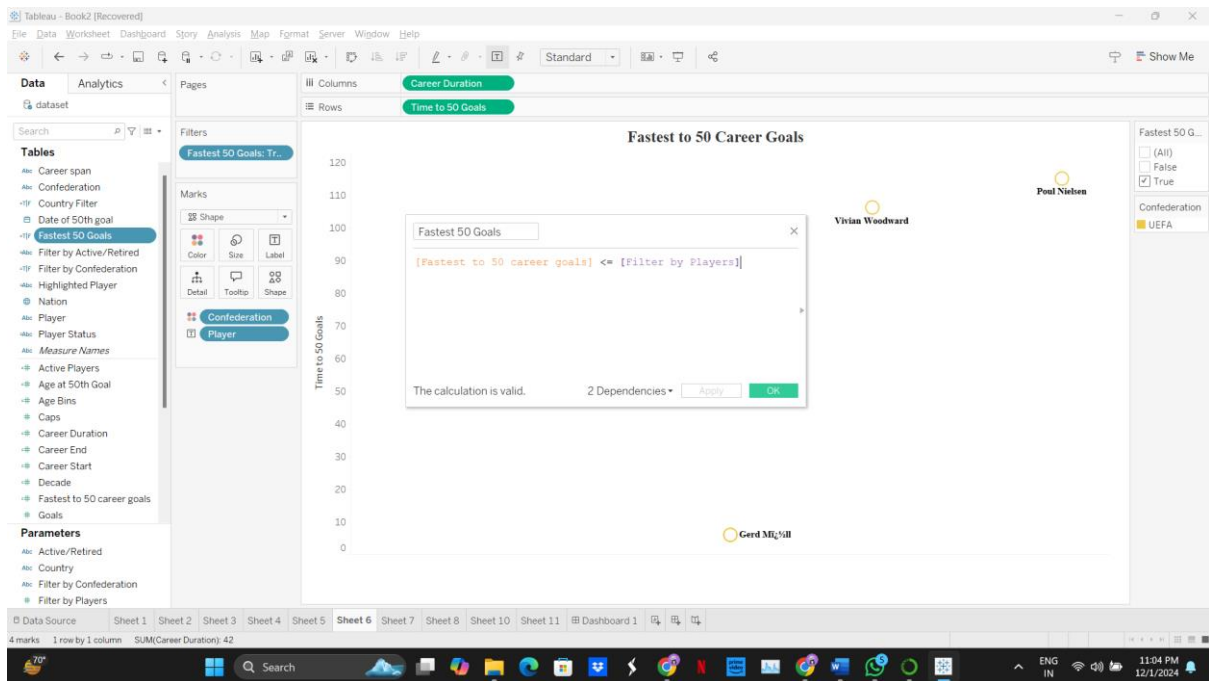
Explanation: A bubble plot shows players who reached the milestone rapidly, emphasizing their early career significance.



Parameter



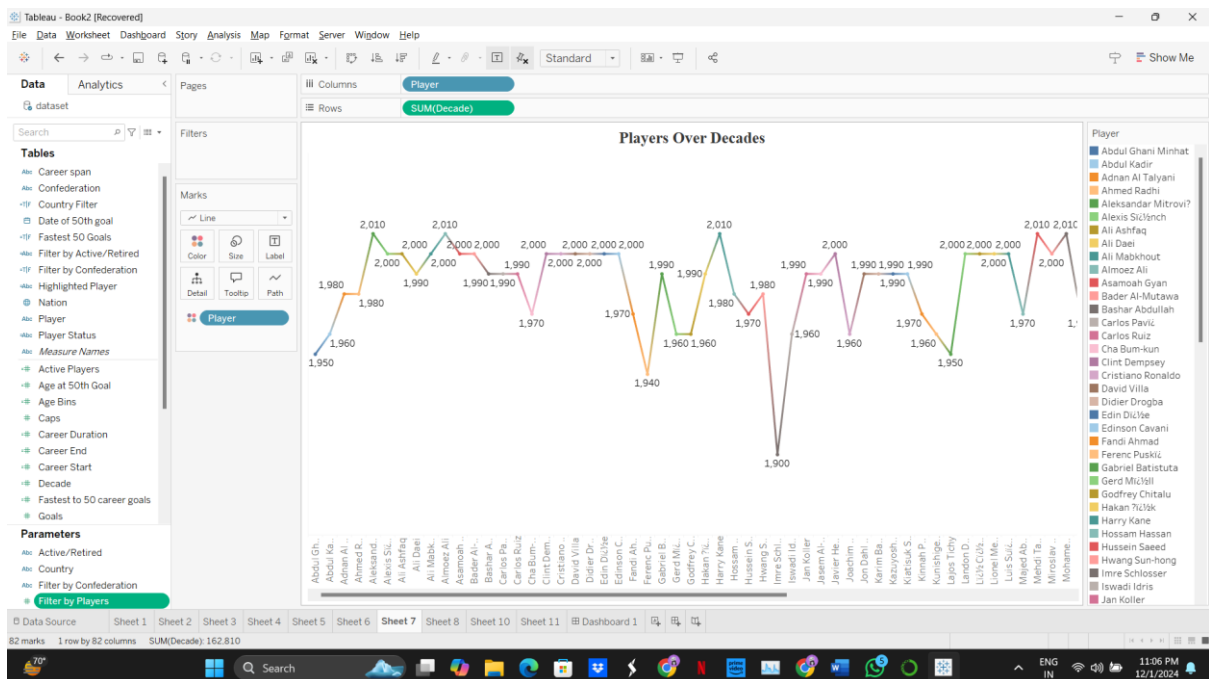
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Sheet 7: Players over Decades

Question Addressed: How has the number of players scoring 50 or more goals evolved throughout time?

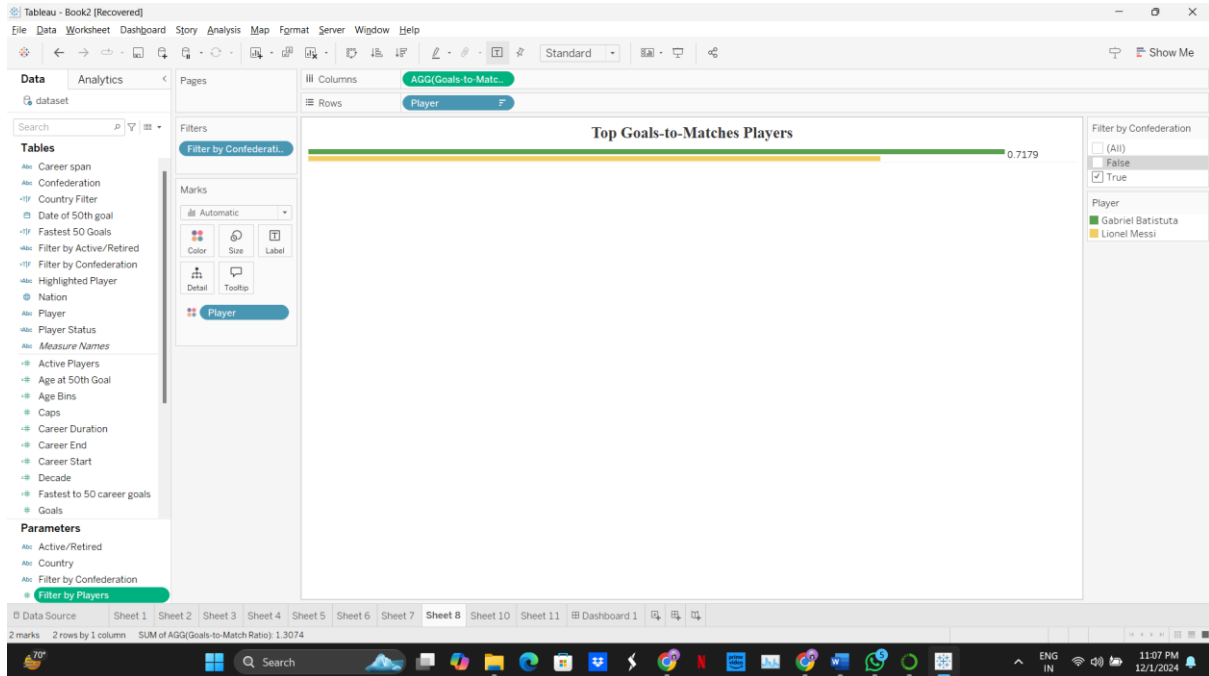
Explanation: A line chart shows the number of players by decade, representing historical patterns in football achievements.



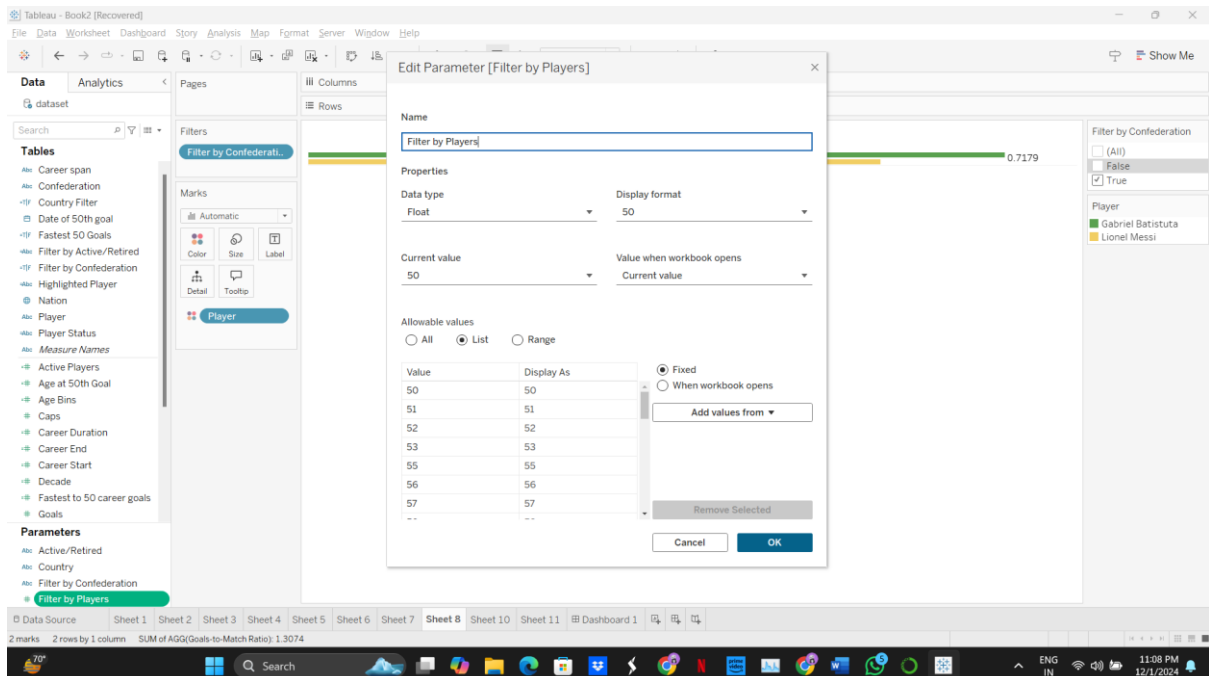
Sheet 8: Top Goals-to-Match Players

Question Addressed: Which player has the highest goal-to-match ratio?

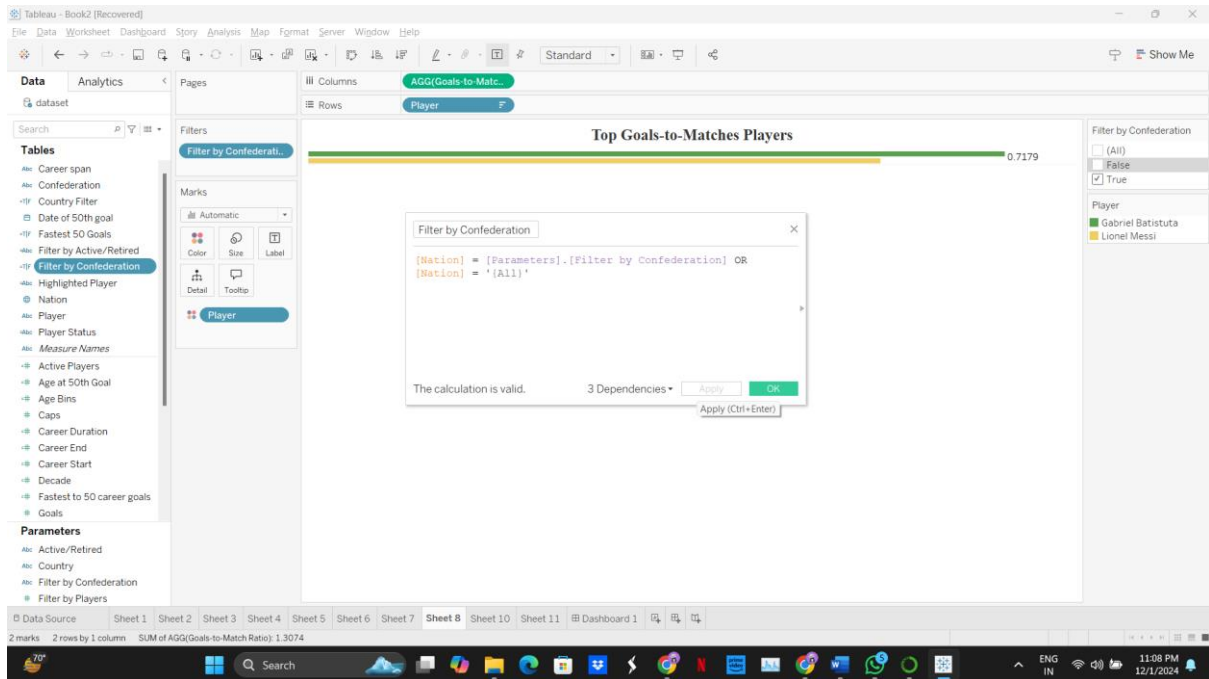
Explanation: A visualization showcases the most efficient players, ranked on goals-to-match ratios.



Parameter



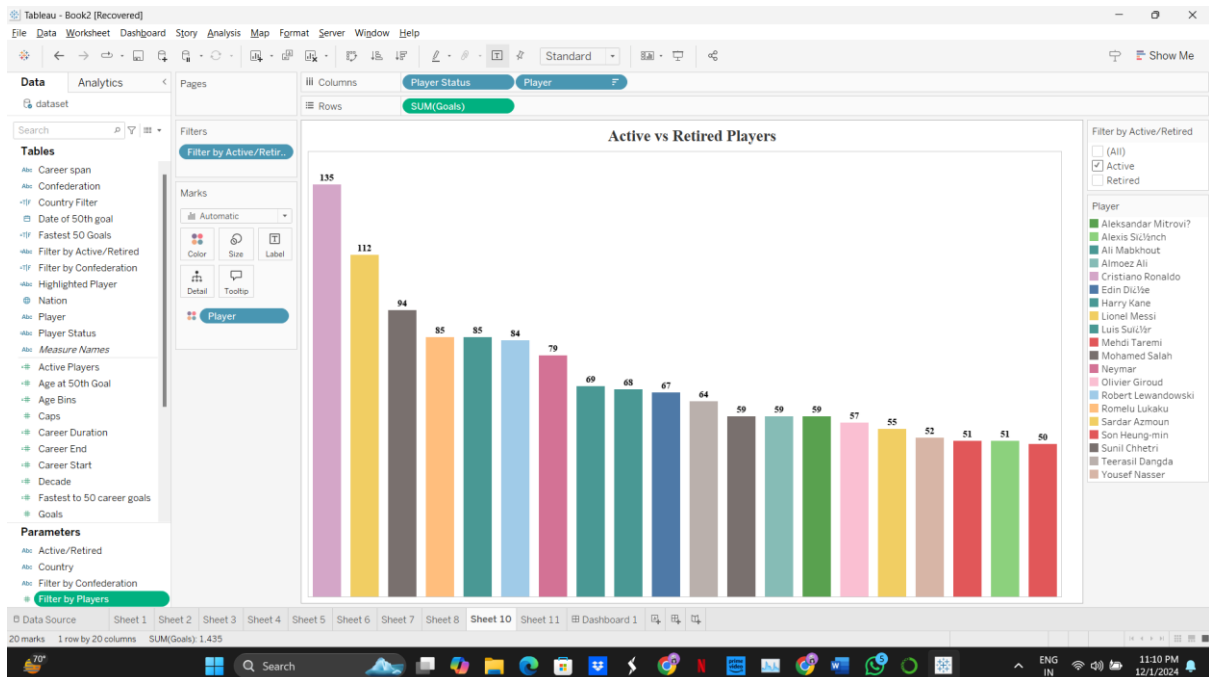
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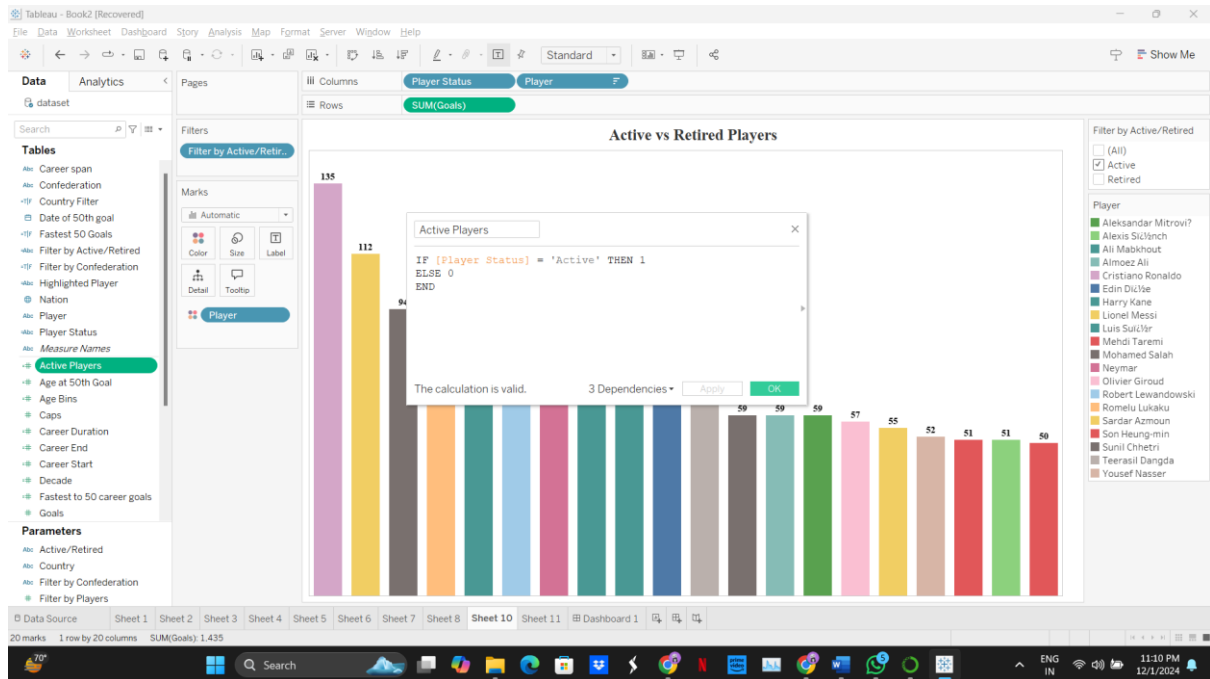
Sheet 9: Active vs Retired Players

Question Addressed: How does the scoring distribution fluctuate between active and retiring players?

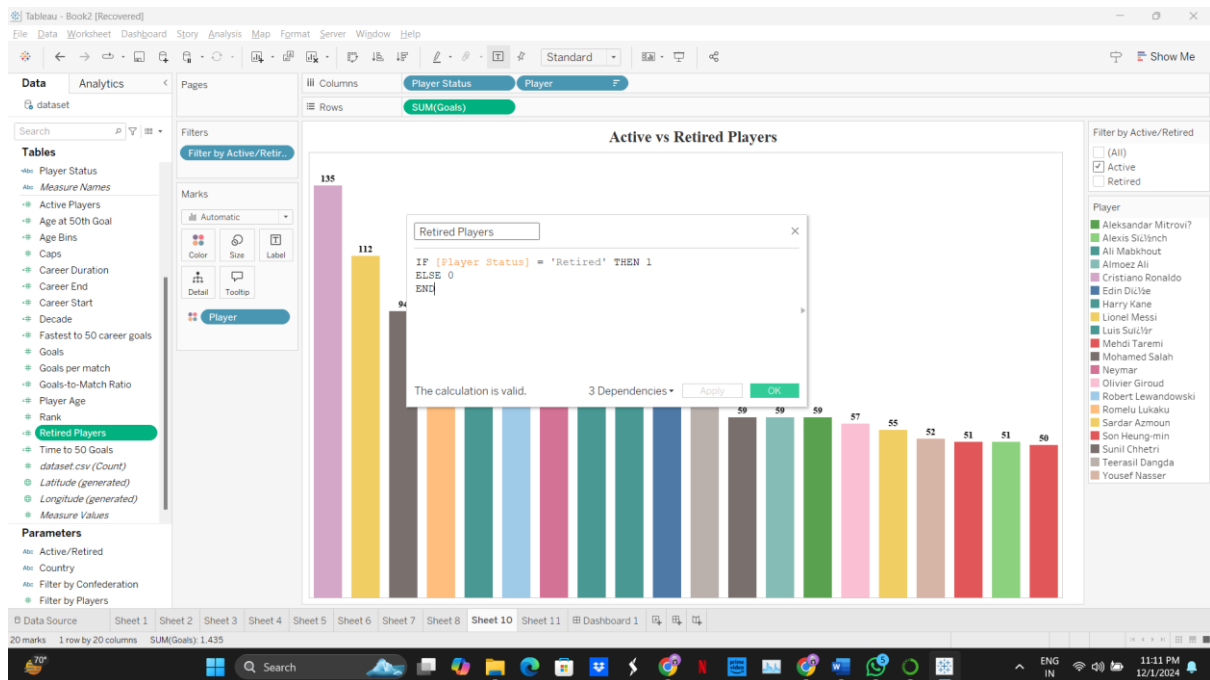
Explanation: A bar chart distinguishes between active and retired players, assessing trends and contributions from both categories.



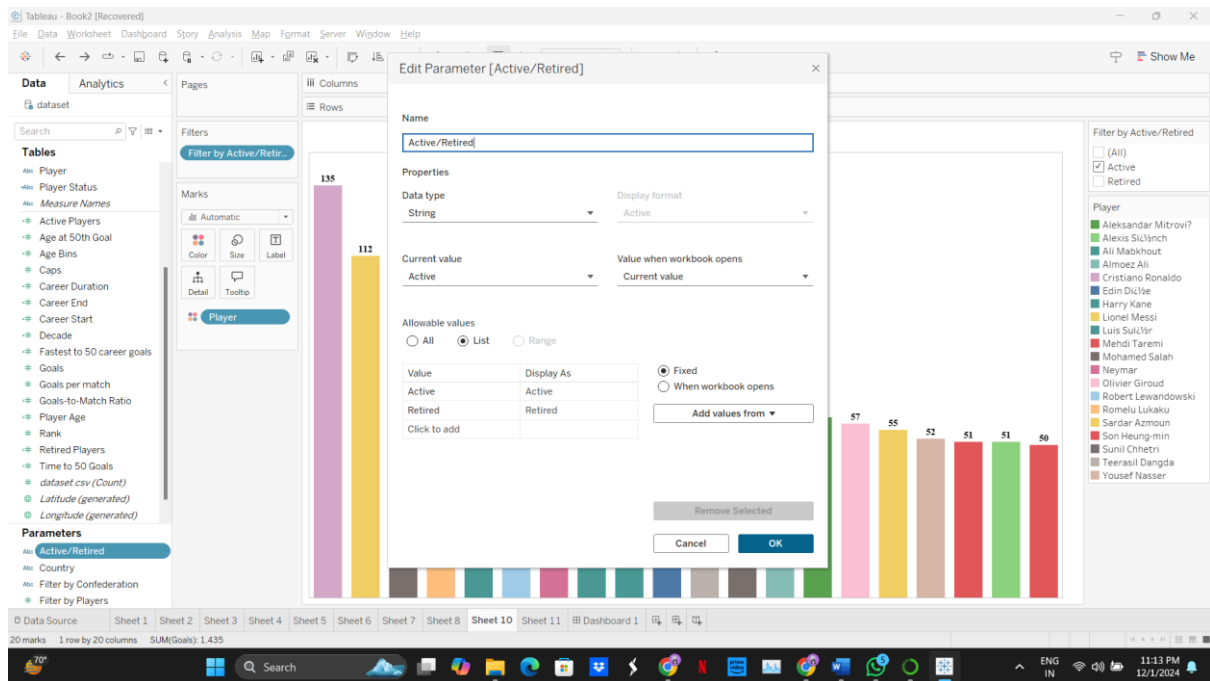
Active Players



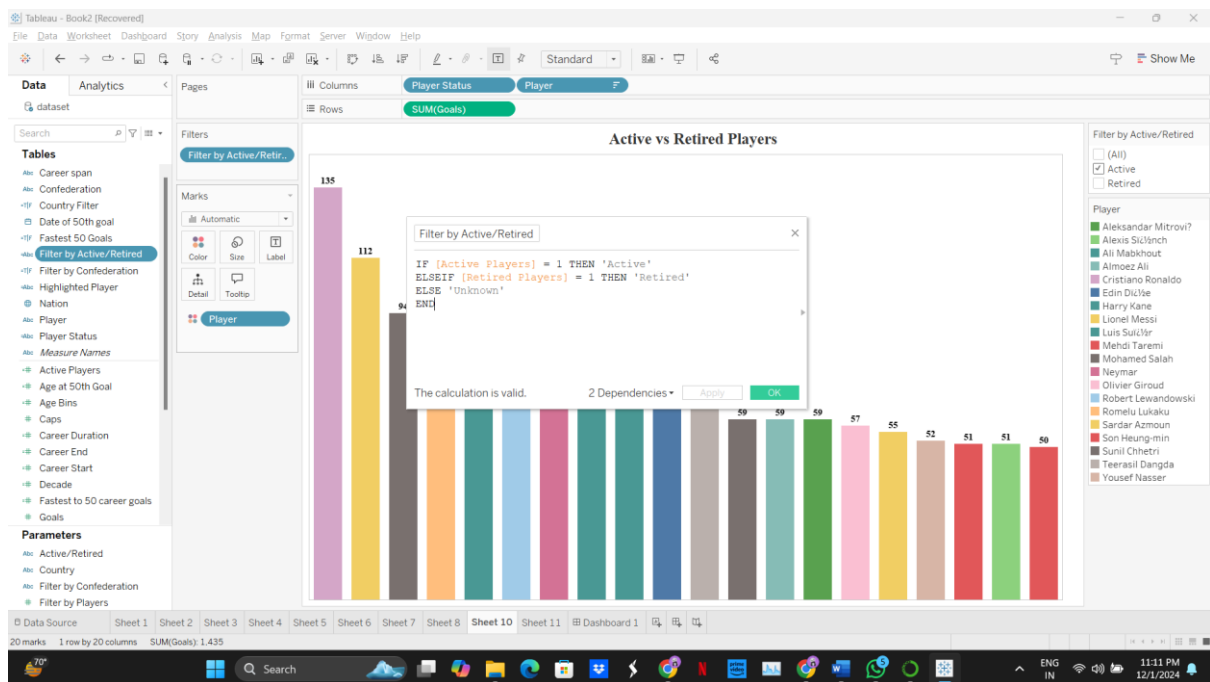
Retired Players



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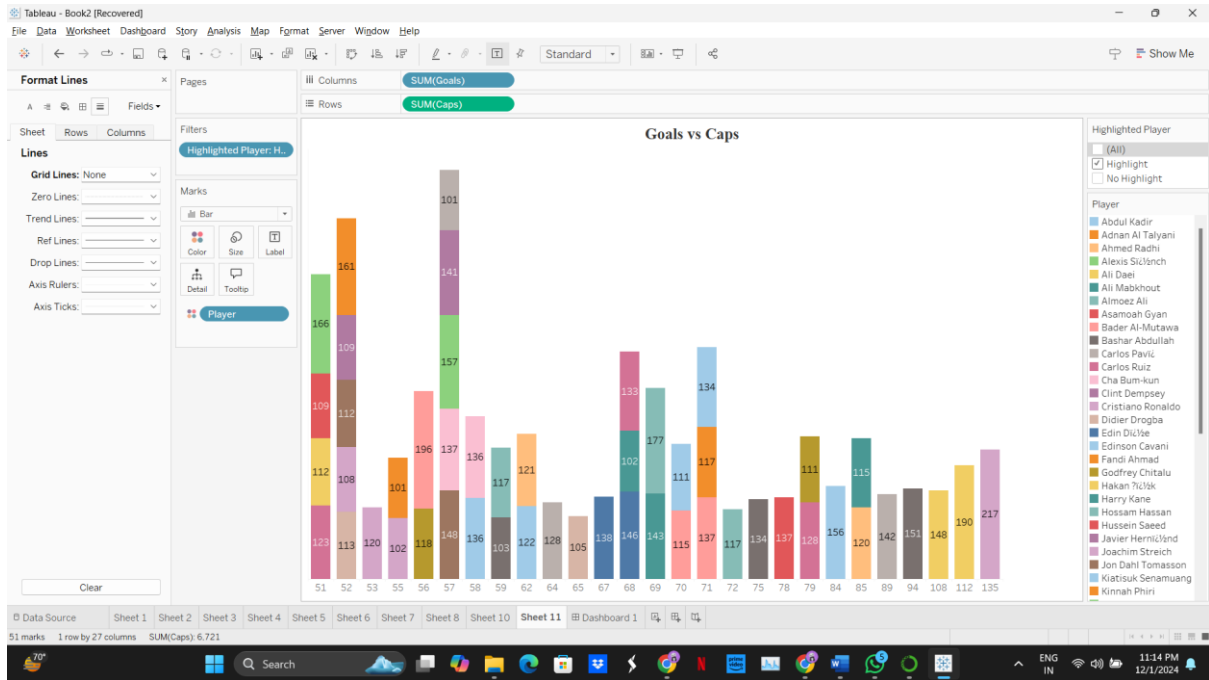
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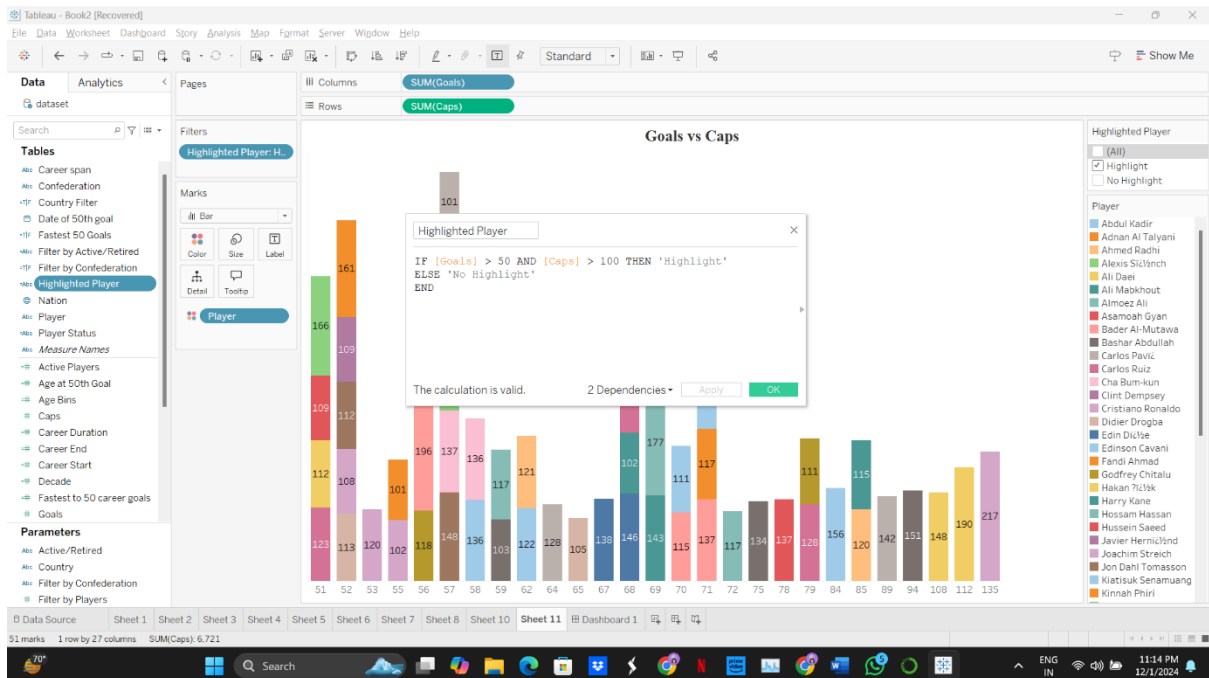
Sheet 10: Goals vs Caps

Question Addressed: How do caps relate to total goals among players?

Explanation: This plot looks into the relationship between total appearances and target counts, reinforcing the patterns seen in Sheet 4.



Calculated Field



SECTION 6: INTERACTIVITY

The dashboard contains interactive controls to improve data exploration:

Filter by Confederation: Targets certain regions, affecting all plots including "Goals by Confederation" and "Caps vs Total Goals."

Filter by Nation: Analyzes data for individual countries, using charts such as "Countries with the Most Players" and "Players Over Decades."

Filter by Player: Showcases individual player success in plots like "Fastest to 50 Career Goals."

Active/Retired Filter: The Active/Retired Filter toggles between active and retired players, impacting "Active vs Retired Players."

Highlighted Player: Highlights a certain player's data in relevant visualizations.

Search/Dropdown Menus: Streamline filter selection while dynamically updating all related plots.

REFERENCES

SECTION 6: REFERENCES

Link To Mural:

<https://app.mural.co/t/533courseprojectteam27389/m/533courseprojectteam27389/1731445101911/5140f8dce1dc394cf79dcc2b696ceea7103e716a>

Link to Dataset:

<https://www.kaggle.com/datasets/whisperingkahuna/footballers-with-50-international-goals-men>

Link To Tableau Publish:

<https://public.tableau.com/app/profile/kanishk.kumar7230/viz/IFT533CourseTeam2/Dashboards1?publish=yes>