Elasticsearch Analysis With FIFA World Cup Dataset

Dataset:

The dataset contains information about FIFA World Cup squads from various countries. It is a compilation of player details, including their name, age, position, team, caps goals, World Cup goals, league, and club affiliation. The data provides insights into the composition of teams participating in FIFA World Cup events leading up to the 2022 tournament.

Elasticsearch:

Elasticsearch is a distributed, RESTful search and analytics engine designed for horizontal scalability, reliability, and real-time search capabilities. It is part of the Elastic Stack and is often used for search, log analysis, and data visualization.

Kibana:

Kibana is an open-source data visualization and exploration tool that integrates with Elasticsearch. It provides a user-friendly interface to create, manage, and visualize data using a variety of charts, graphs, maps, and dashboards.

Visualization Overview:

1. Maximum Goals by National Teams:

- Visualization Type: Bar Chart
- Description: This panel visualizes the maximum number of goals scored by national teams. It allows for a quick comparison of goal statistics for each national team.

2. Dashboard Panel: Count of players with different age

- Visualization Type: Area chart
- Description: This panel provides you with the range of all players which are active in the upcoming world cup.

3. World Cup Goals of Players:

- Visualization Type: Waffle chart
- Description: This visualization presents the count of World Cup goals scored by players in descending orders

4. Top 10 Leagues and Players Age:

- Visualization Type: Vertical Bar Chart
- **Description**: This visualization highlights the top 10 leagues based on Average age of all players

Elasticsearch Queries and Descriptions:

1. Query to Get Data of Players with the Team "Argentina":

- Retrieves player data for the specified team "Argentina". Useful for obtaining a list of players representing a specific team.

2. Query to Get Data of All Players:

- Retrieves data of all players. Useful for getting a comprehensive view of all players in the dataset.

3. Query to Get Players with Minimum WC Goals Greater Than 0:

- Description: Retrieves players with World Cup goals greater than 0. Useful for identifying players who have scored in the World Cup.

4. Query to View Data of Players with Position "Forward":

- Retrieves player data for the specified position "Forward". Useful for understanding the characteristics and statistics of forwards.

5. Query to Get Players from Argentina with WC Goals Greater Than 0:

- Description: Retrieves players from the team "Argentina" with World Cup goals greater than 0. Useful for identifying goal-scoring players from a specific team.

6. Query to Get Data Sorted by Age in Descending Order:

- Retrieves player data sorted by age in descending order. Useful for understanding the age distribution of players.

7. Query to Get Top World Cup Goal scorer of Every Country:

- Retrieves players from each country who have the most World Cup goals. Useful for identifying the top goal scorer from each country.

8. Query to Get Players with Most Caps for Every Country:

- Retrieves players with the most caps for each country. Useful for identifying players with significant international experience for their respective countries.