

FIFA Football Analytics - A Data-Driven Exploration using Python

Overview:

The "FIFA Football Analytics" project is a data-driven exploration using Python, focusing on analyzing player data from the FIFA 20 video game. The dataset, sourced from Sofifa, includes detailed information about 18,278 players, featuring 104 different attributes for each player.

Objectives:

1. Data Loading and Exploration:**

- Load the dataset into a Pandas Data Frame.
- Explore the structure of the dataset using `'head()'`, `'columns'`, and `'shape'` functions.

2. Nationality Analysis:

- Examine the distribution of player nationalities.
- Identify the top 5 nationalities with the highest representation.

3. Player Salary Analysis:

- Extract and analyze player salaries (`wage_eur`).
- Display the top 10 players and their corresponding salaries.

4. Country-Specific Analysis (Germany and Argentina):

- Explore player data specific to Germany and Argentina.
- Investigate player information, such as age, height, weight, and various in-game attributes.

5. Sorting and Filtering:

- Sort players from Argentina based on height and wage, showcasing extremes in the dataset.

6. Visualizations:

- Create bar charts to visually represent:
 - Top 5 player salaries.
 - Top 5 represented nationalities.

7. Shooting and Defending Analysis:

- Examine player shooting abilities, displaying the top 5 players with the lowest shooting scores.
- Analyze player defending abilities, showcasing the top 5 players with the highest defending scores.

Tools and Libraries Used:

- Python
- Pandas
- Matplotlib

Conclusion:

The "FIFA Football Analytics" project aims to provide insights into player data from the FIFA 20 game, exploring various aspects such as nationality distribution, player salaries, and in-game attributes. Through Python and data visualization, this project provides a comprehensive understanding of the characteristics of football players in the FIFA 20 dataset.