**IPL Player Performance Analysis - Exploratory Data Analysis (EDA)**

**Overview**

This project involves performing **Exploratory Data Analysis (EDA)** on an **IPL Dataset** using **Python and Pandas**. The dataset contains player performance statistics from an IPL season, and the goal is to derive insights and create visualizations based on various performance metrics.

**Key Objectives**

* Analyzing player performance based on **matches played, batting averages, strike rates, and boundary counts**.
* Creating new data columns for **cleaned highest scores, first and last names**, and **percentage of runs scored via boundaries**.
* Finding **top-performing players** based on different criteria such as half-centuries, centuries, and overall runs.
* Creating **data visualizations** like **heatmaps, histograms, scatter plots**, and **bar charts** for better insights.

**Analysis Performed**

* **Match & Performance Statistics**
  + Maximum matches played by an individual in a season.
  + Players with the highest batting averages and strike rates.
  + Players who scored at least one century or multiple half-centuries.
* **Feature Engineering**
  + Splitting player names into first and last names.
  + Cleaning highest scores by removing asterisks and converting them into integers.
* **Visualizations & Insights**
  + Heatmap of feature correlations.
  + Histogram of matches played and balls faced.
  + Scatter plot of runs scored vs. balls faced.
  + Top players based on **boundaries, sixes, and total runs**.

**Tools Used**

* **Python (Pandas, Matplotlib, Seaborn)**
* **Jupyter Notebook**

**Conclusion**

This project provides in-depth insights into **player performance trends** in an IPL season, helping in data-driven analysis for cricket analytics.