Cricket Analytics using Python

**Summary problem statement:**

The owners and the management of Mumbai Indians want to identify the best possible players suitable for them for the next auction. They have hired you as an Analyst to help them identify the best IPL team for the 2022 auction.

**Project Objectives:**

To create a dashboard with various filtering and sorting options by year, teams etc

**Project scope:**

This project include the analysis of IPL maths data analysis and finding the sorting batsman and bowlers in descending order based on perfomence. Providing user a dashboard with filter options which they can use to see the perfomence of player in recent years.

**Out of scope:**

* Not taking fielders and wicket keepers into consideration
* We can not take retirement or injury of a player into consideration

**Function requirements:**

* Rank batsmen by year and overall based on ability
* Rank bowlers by year and overall based on ability
* Rank the most valuable player in IPL over all the years
* Visualize this in an intuitive Power BI Dashboards
* Find Similar Batsmen and Bowler

**Dataset Details:**

* **id:** Unique number forMatches
* **inning:** Inning attribute (1 or 2)
* **over:** Over count (0 to 19)
* **batsman:** Batsman on the Strike
* **non\_striker:** Batsman on the Non-strike
* **bowler:** Bowler bowling that particular over
* **batsman\_runs** : runs scored by batsman (0 to 6)
* **extra\_runs:** Extra runs scored in that ball
* **total\_runs:** runs scored by batsman + extra runs
* **no\_boundary**: Boundaries (4s or 6s)
* **is\_wicket :** 0 - not out / 1 - out
* **dismissal\_kind :** Type of dismissal (Wicket)
* **dismissal\_kind :** Type of dismissal (Wicket)
* **Player\_dismissed:** Name of Dismissed Player
* **fielder :** fielder's name

**Schedule, timeline and deadlines:**

Week 0:

To understand the business requirements and create BRD for project

Week 1:

Data Pre-processing &amp; Exploratory Data Analysis

Week 2:

Creating KPIS

Week 3:

To create dashboard and user manual for dashboard

**KPIS:**

**Batsman:**

* Strike rate:(Total runs scored/total balls faced)\*100
* Strike rate against fast bowler=total runs scored against spinners/totals balls faced
* Strike rate aginst spinners=total runs scored against fast bowled/total balls faced
* Boundary percent=(total runs scored with boundery/total runs scored)\*100
* % dismissal against the spinner=(total dismissal against spinner/total dismissal)\*100
* % dismissal against the fast boeler=(total dismissal against fast/total dismissal)\*100

**Bowlers KPI:**

* average ball required to take first wicket=
* average wickets per match=no of wickets/no of matches
* economy in different overs(powerplay/middle over/death over)
* % of dot ball=(total dot balls/total balls played)\*100
* %boundary balls=(total boundery balls/total ballbowled)\*100

**Teams KPI:**

* %win=(total win/total match)\*100
* %loss=100-(%win)
* %win against particular team=(total win against team/total match against team)\*100
* %win by chase=(wins by chase/total wins)\*100
* %win by defending=(wins by runs/total wins)\*100
* %win on home ground