IPL AUCTION BOT: Dream Team Invictus Challenge

**Our bot consists of a folder containing the python auction function and the attached datasets. The python function works in these simple stages-**

1. Reading the .csv data file which gives us access to all player data
2. computing the highest bidding price for all players using an ML model taking into account many parameters given in the dataset.
3. the bidding process.
4. final team assembly and remaining purse.

**We’ve developed a model which makes sure of the following things:**

1. Proper balance between Batsmen, All-Rounders, Bowlers and Wicket Keepers.
2. Prevents extremely high bidding for any single player, ensuring balance.
3. Proper distribution of purse between all four player categories
4. Limit on purse used, player amount and number of foreigners (proper balance also ensured)
5. If two batsmen, for example, have been bought at low prices, no further bidding will be carried out for batsmen with lower ratings, and only batsmen with higher ratings will be bid on.

**How does the model ensure which players to bid for and till what amount?**

Ans. – I’ve developed an ML model which gives players of all categories individual ratings on the basis of their stats. That rating is then used to predict the highest bidding amount I can go for that player, for example, 11 Cr for David Warner and 8 Cr for Rohit Sharma. If the bid amount surpasses that value, the model pulls itself out of the bid. Players not valuable enough will not be bid for.

**How does the bidding process go about?**

Ans. – All four categories go for bidding separately, and players are shuffled and picked randomly. The initial bid is set on the base price, and bids from each side are set on 0.25 Cr. The opposing teams have to manually bid using “bid” commands, and can opt out using “out” commands. If the next bid violates any constraints, like purse, balance, strength and overseas limit, the bid is automatically cancelled and the loop breaks.

**What are some drawbacks of the model?**

Ans. – Our bot has some drawbacks, and they are-

1. Bid amount is fixed at 0.25 Cr
2. Multiple teams bidding at once can prove to be chaotic
3. Some purse might be leftover, but not more than a couple of crores, which is ensured by our balancing model.

If you want further clarifications, you can message us personally, and for an even more detailed working, you may use ChatGPT to analyse the code line by line. We, however, have placed notes at certain points in between to guide any reader through.

Thank you for giving us this platform to demonstrate our skills!