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Q: As a member of the Research and Development team, how would you decide whether a Minor League prospect is ready to be promoted to the Majors?

Answer:

My first approach would be to ask scouts and managers to classify current Major League players in three groups:

- Low-Level player
- Solid Starter player
- All-star

With these labels and the statistics of each player, I would use a classification algorithm for these three classes. Even if this algorithm uses solid data as its feed, it is also using labels created by the managers, and as such, we can do feature selection that will fit to what managers consider are important attributes.

Next, I would run the classification algorithm in current AAA-League players to see whether they are better or worse than their peers in the Major League are. We could retrain the algorithm in AAA-Players and run it in AA or A-league players to further use it as a promotion tool for the other leagues.

It is very important to retrain the algorithm with input from managers at different levels, because it would be unfair to use the same dataset to compare Major League players and Rookie players. We could even have multiple classification algorithms for all the different levels.

This classification approach seizes in the fact that the experts are giving the input, and as such, we can measure the “immeasurable” qualities that many times are not easy to quantify from stats alone, like mindset and physicality.