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We need to be able to define several implementations of a function $p : \text{Roster} \rightarrow \mathbb{R}$ which assigns a numeric value to a Roster's projected rest-of-season performance.

rest-of-season performance - league team record or total starting-lineup fantasy points or probability of winning, through the playoff rounds?

We have no way of knowing who will be on other teams in the future, so, of those options, we're limited to total starting-lineup fantasy points. Do we want to concern ourselves at all with the distribution of week-by-week point totals, though? Maximize the minimum? Let's just do a calculation of total starting-lineup fantasy points and see how that would work.

The simplest method might be to use $-x$, where x is the average rest-of-season ranking from a bunch of different sources. This would fail to take into account the league's settings, however. In order to do this, we would need stats projections for the rest of the season. Would we want to use game-by-game projections and add them up? By **Roster**, we mean, the *whole* league Roster, including the bench. So, technically, a calculation of the team's performance would *require* game-by-game statistics, in order to determine the starting lineup for any given week. If we just maximize the total projected fantasy points for the rest of the season for all players, would that put us in a drastically different place? It definitely could. Think of someone with a very unbalanced roster. So that is not an option.

So we have

- p_0 - average rest-of-season ranking from multiple sources
- p_1 - stats projections + league settings for each week, choosing the best line-up, summing those up
- p_2 - stats projections + league settings for rest-of-season, choosing the line-up that would give us the most points if we made no changes week-to-week

p_1 more accurate than p_2 and not too much harder, so it's a choice between p_0 and p_1 . p_0 , as stated before, fails to take into account league settings, so p_1 it is.

potential features

- enable the user to select from p_0 , p_2 , and other team-ranking metrics, explaining their pros and cons
- this would return the top trades under the selected performance measure. We could then show the value of the not-selected performance measures along with the results.

Ok, so we have our stats projection sources and league settings