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NBA Analysis Project – Proposal

For my project, I am going to be pursuing the Data Visualization path. My goal is to succinctly model NBA data to determine how the best teams are built. So far, I have plans for three sections and am working on finding data for a fourth.

The first section will contain two bar graphs. The first will be how salaries are distributed across a team. So, for each position, how much that team is spending. The second bar graph will be a breakdown of how many points they are getting from each position. There will be dropdowns to change the team and statistic, like rebounds or assists, to use. I think that this will show what teams are prioritizing their money for and hopefully will show discrepancies between the best teams and the worst.

The second section will be similar but will use a scatter plot. It will show the relationship between salary and age for a team, with the size of the bubble changing depending on player efficiency rating (PER). This too will be able to be easily modifiable by the user with a dropdown for team or statistic.

The third section would be a pie chart that breaks down the stats for each team by player. So, a graph for the Washington Wizards would show Player A is responsible for this section of the scoring each night, Player B this much, etc. Again, this could be filterable by statistic or team.

I have been able to find data for each of my above ideas already using Kaggle. I ideally will limit the data to this year to reduce scope, but I have been able to get data from previous years, so that can be expanded. There is more than enough data as there are 450 players in the NBA at any given time. The data set around salaries can be found [here](https://www.kaggle.com/datasets/jamiewelsh2/nba-player-salaries-2022-23-season). For stats, I will use this [data set](https://www.kaggle.com/datasets/sumitrodatta/nba-aba-baa-stats).

For a fourth section, I have recently began picturing something that would show how many trades teams have done over a three-year stretch. This would then potentially be weighted by the total PER involved in the trade to determine if these were large or small trades. This section would aim to show how good teams are built, through draft and free agency or through trade. I have not yet been able to find a data set that compiles all the trades made by teams, but I believe the data is out there somewhere. This would be a large task on its own and since I am doing this project on my own, I will likely not have time to complete this. However, if the other sections are not sufficient for the project, I can dedicate time towards this.