Stats by Age: A Study on the Relationship of an NBA Player's Statistics and Age

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BIG DATA PROBLEM DATA RESOURCE ANALYSIS ASSESSMENT

Question:
Given the statistical records of NBA players, how do we determine the average number of points, rebounds and assists per game of a player's age?

Short Background:

- National Basketball Association, also known as NBA, the world's leading professional men's basketball association located in North America.
- We'll look into the the 3 main stats of a basketball player: points, rebounds, and assists.

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Short Background:

- The goal is to group the statistics of the players depending on their age, and determine their average points, rebound, and assists. Through this, the interval of each stat as the player ages is calculated to see the trend line of the growth of the NBA players.
- The statistics will be compared as the average stat per age of player per game.
- Possible Conclusions Resulting from the Data:
  - The peak age of an NBA player
  - The productivity length
  - Whether the stat line production shifts from points, rebounds, and assists depending on age.

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- The data that will be used for this research will be composed of all the game production statistical line of the NBA players from 1951-2017.
- The group shall make use of the data given in the statistics taken from the Kaggle website

Source: https://www.kaggle.com/imcoates/nba-stats/data

- Age range is from 18-44 years old
- There are duplicate names of player for some year which represent those who played for different teams
- MapReduce function was used to thin out the dataset

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- Players seem to get better over the course of an specific period of time known as the “prime”, a stage where peak performance level is experienced
- The prime of players depending on the role/position seems to vary, as based from the following source: http://www.nbaminer.com/golden-ages-of-basketball-players/
- However as the players continue to age and play past their suggested prime, their average points per game seems to decline
- This is likely due to the decline in bodily functions humans experience with age

Thank You and Merry Xmas Sir Noel!