Task for Candidates: Analysis of NBA Player Stats Dataset for the 2023-2024 Season

Objective

Analyze the NBA player statistics dataset for the 2023-2024 season, focusing on monthly performance trends. The dataset is updated monthly, and you will be working with the latest data available for each month.

Instructions

1. Data Collection:

- Access the [NBA Player Stats Dataset for the 2023-2024 Season].
- Download the latest version of the dataset for each month available. There are 14 versions; ensure you are using the correct one for each respective month.

2. Data Preprocessing:

- Clean the data to handle any missing values, duplicate entries, and ensure consistency across the monthly datasets.
- Combine the monthly datasets into a single comprehensive dataset, clearly marking the month for each record.

3. Exploratory Data Analysis (EDA):

- Perform EDA to identify key trends and insights. Focus on player performance metrics such as points per game, assists, rebounds, and other relevant statistics.
- Visualize the data using charts and graphs to highlight monthly trends and variations in player performance.

4. Statistical Analysis:

- Conduct statistical tests to determine if there are significant differences in player performance metrics across the months.
- Use regression analysis to predict future performance trends based on the data.

5. Report and Presentation:

- Prepare a detailed report summarizing your findings, including EDA results, statistical analysis, and key insights.
- Create a presentation with visual aids to communicate your findings effectively. The presentation should be concise and highlight the most important trends and insights.

Submission:

- Submit your combined dataset, analysis code (preferably in a Jupyter Notebook), report, and presentation slides.
- Ensure your code is well-documented, and include comments explaining each step of your analysis.

Evaluation Criteria:

- Accuracy and thoroughness of data preprocessing.
- Depth and clarity of exploratory data analysis.
- Validity and interpretation of statistical tests and regression analysis.
- Quality and professionalism of the report and presentation.
- Overall understanding and insight into the dataset and the analysis process.

By focusing on the latest data for each month, candidates will demonstrate their ability to handle real-time data updates and provide timely insights based on evolving datasets.