# Basketball Analytics Summer Intern: Application

**Please title responses to the questionnaire & data question as [LASTNAME]_[FIRSTNAME]_Writeup.pdf. Please title any code / data work as [LASTNAME]_[FIRSTNAME]_Data_Work.[EXTENSION].**

**Questionnaire:**

1) Provide an example of where you extracted insights from data to arrive at a conclusion. Projects from school, personal interest, or workplace (that you're allowed to discuss) are eligible. Please clearly lay out the objective, provide background information, and describe the project as specifically as possible, particularly regarding technology stack, methodology, and conclusions. Feel free to provide supporting materials if applicable. NOTE: Does not have to be sports-related. (500 words)

2) Please provide a data visualization – doesn't have to be yours – that you find particularly engaging, and describe why it's engaging. Please include in the PDF document. (150 words)

3) What is one example where you've overcome adversity to attain a long-term goal? (300 words)

4) What is one example of when you worked with a team to achieve a common goal? (300 words)

**Data Question:**

1) Attached you will find a CSV titled "NBA_Names". This contains the first and last names of certain historical NBA players. Your objective is to find the longest "name chain" possible (e.g. "Kobe Bryant Reeves," combining Kobe Bryant and Bryant Reeves). Use each player's name only once.
    a. What is your methodology? What is the longest name chain you can find?
    b. What if you remove suffixes such as "Jr."? How many distinct suffixes can you find?
    c. What if you treat every hyphenated last name as both possibilities (e.g. "Shai Gilgeous-Alexander" becomes "Shai Gilgeous" and "Shai Alexander" as separate people)?
    d. Finally, what if names are reversible (e.g. "Kobe Bryant" can also be treated as "Bryant Kobe")?

2) Within the CSV, you'll also find "Draft Year" and "Years of Service" columns. Below, consider only those with nonzero "Draft Year" values.
    a. What is the fewest number of players whose careers span 1955 to 2020?
    b. What is the longest name chain whose careers overlap with each others'? (e.g. "LeBron James" and "James Edwards" would not qualify since they did not play at the same time)

3) What is the biggest challenge you faced in this task?

**Misc:** Please provide the earliest date that you could start a 10-week internship by, as well as the latest date you could finish by.