- 1. Install basketball reference web scraper
- In [1]: !pip install basketball-reference-web-scraper

Requirement already satisfied: basketball-reference-web-scraper in /op t/anaconda3/lib/python3.9/site-packages (4.13.0) Requirement already satisfied: lxml==4.5.1 in /opt/anaconda3/lib/python 3.9/site-packages (from basketball-reference-web-scraper) (4.5.1) Requirement already satisfied: certifi==2018.10.15 in /opt/anaconda3/li b/python3.9/site-packages (from basketball-reference-web-scraper) (201 8.10.15) Requirement already satisfied: chardet==3.0.4 in /opt/anaconda3/lib/pyt hon3.9/site-packages (from basketball-reference-web-scraper) (3.0.4) Requirement already satisfied: requests==2.20.0 in /opt/anaconda3/lib/p ython3.9/site-packages (from basketball-reference-web-scraper) (2.20.0) Requirement already satisfied: idna==2.7 in /opt/anaconda3/lib/python3. 9/site-packages (from basketball-reference-web-scraper) (2.7) Requirement already satisfied: urllib3==1.24.3 in /opt/anaconda3/lib/py thon3.9/site-packages (from basketball-reference-web-scraper) (1.24.3) Requirement already satisfied: pytz==2018.6 in /opt/anaconda3/lib/pytho n3.9/site-packages (from basketball-reference-web-scraper) (2018.6)

2. Import neeeded data from season

```
In [2]: from basketball_reference_web_scraper import client
data_years = []
years = [2024]
for year in years:
    data = client.players_advanced_season_totals(year)
    data_years.append(data)
names = []
for player in data:
    names.append(player['name'])
slugs = []
for player in data:
    slugs.append(player['slug'])
NBAData = client.players_season_totals(season_end_year=2024)
```

4. Import game log for player

In [13]: PlayerName = 'Luka Doncic'

Hit Rate %s for 3 Pointers Made

```
In [14]: r PlayerDict in NBAData:
           if PlayerDict.get('name')== PlayerName:
               slug = (PlayerDict['slug'])
         redata = client.regular season player box scores(
           player identifier = sluq,
           season_end_year = 2024
         tal_games = len(moredata)
         st_5_games = len(moredata[-5:])
         st_10_games = len(moredata[-10:])
         e 3pm count = sum(game['made three point field goals'] >= 1 for game in m
         e_3pm_last5_count = sum(game['made_three_point_field_goals'] >= 1            for gam
         e_3pm_percentage = (one_3pm_count / total_games) * 100
         e 3pm last5 percentage = (one 3pm last5 count / last 5 games) * 100
         e 3pm last10 count = sum(game['made three point field goals'] >= 1 for ga
         e_3pm_last10_percentage = (one_3pm_last10_count / last_10_games) * 100
         o_3pm_count = sum(game['made_three_point_field_goals'] >= 2                      for game in m
         o 3pm percentage = (two 3pm count / total games) * 100
         o 3pm last5 count = sum(game['made three point field goals'] >= 2 for gam
         o_3pm_last5_percentage = (two_3pm_last5_count / last_5_games) * 100
         o 3pm last10 count = sum(game['made three point field goals'] >= 2 for ga
         o_3pm_last10_percentage = (two_3pm_last10_count / last_10_games) * 100
         ree_3pm_count = sum(game['made_three_point_field_goals'] >= 3 for game in
         ree_3pm_percentage = (three_3pm_count / total_games) * 100
         ree 3pm last5 count = sum(game['made three point field goals'] >= 3 for g
         ree_3pm_last5_percentage = (three_3pm_last5_count / last_5_games) * 100
         ree_3pm_last10_count = sum(game['made_three_point_field_goals'] >= 3 for
         ree 3pm last10 percentage = (three 3pm last10 count / last 10 games) * 10
         ur_3pm_count = sum(game['made_three_point_field_goals'] >= 4 for game in
         ur 3pm percentage = (four 3pm count / total games) * 100
         ur 3pm last5 count = sum(game['made three point field goals'] >= 4 for ga
         ur_3pm_last5_percentage = (four_3pm_last5_count / last_5_games) * 100
         ur_3pm_last10_count = sum(game['made_three_point_field_goals'] >= 4            for g
         ur 3pm last10 percentage = (four 3pm last10 count / last 10 games) * 100
         ve 3pm count = sum(game['made three point field goals'] >= 5 for game in
         ve 3pm percentage = (five 3pm count / total games) * 100
         ve_3pm_last5_count = sum(game['made_three_point_field_goals'] >= 5 for ga
```

NBA Hit Rate Generator - Jupyter Notebook

```
ve 3pm last5 percentage = (five 3pm last5 count / last 5 games) * 100
ve 3pm last10 count = sum(game['made three point field goals'] >= 5 for g
ve_3pm_last10_percentage = (five_3pm_last10_count / last_10_games) * 100
int('3 Point Hit Rate Percentage')
int()
int("Player: ", PlayerName)
int()
int()
int("3 Pointers Made:")
int()
int()
int("1+ 3PM Hit Rate (Season): ",one_3pm_percentage,"%")
int()
int("1+ 3PM Hit Rate (Last 5 Games): ",one 3pm last5 percentage,"%")
int()
int("1+ 3PM Hit Rate (Last 10 Games): ",one 3pm last10 percentage,"%")
int()
int()
int("2+ 3PM Hit Rate (Season): ",two_3pm_percentage,"%")
int()
int("2+ 3PM Hit Rate (Last 5 Games): ",two_3pm_last5_percentage,"%")
int()
int("2+ 3PM Hit Rate (Last 10 Games): ",two 3pm last10 percentage,"%")
int()
int()
int("3+ 3PM Hit Rate (Season): ",three 3pm percentage,"%")
int()
int("3+ 3PM Hit Rate (Last 5 Games): ",three_3pm_last5_percentage,"%")
int()
int("3+ 3PM Hit Rate (Last 10 Games): ",three_3pm_last10_percentage,"%")
int()
int()
int("4+ 3PM Hit Rate (Season): ",four 3pm percentage,"%")
int()
int("4+ 3PM Hit Rate (Last 5 Games): ",four 3pm last5 percentage,"%")
int()
int("4+ 3PM Hit Rate (Last 10 Games): ",four_3pm_last10_percentage,"%")
int()
int()
int("5+ 3PM Hit Rate (Season): ",five_3pm_percentage,"%")
int()
int("5+ 3PM Hit Rate (Last 5 Games): ",five_3pm_last5_percentage,"%")
int()
int("5+ 3PM Hit Rate (Last 10 Games): ",five 3pm last10 percentage,"%")
int()
```

3 Point Hit Rate Percentage Player: Luka Doncic 3 Pointers Made: 1+ 3PM Hit Rate (Season): 93.9393939393939394 % 1+ 3PM Hit Rate (Last 5 Games): 100.0 % 1+ 3PM Hit Rate (Last 10 Games): 100.0 % 2+ 3PM Hit Rate (Season): 81.81818181818183 % 2+ 3PM Hit Rate (Last 5 Games): 100.0 % 2+ 3PM Hit Rate (Last 10 Games): 90.0 % 3+ 3PM Hit Rate (Season): 51.515151515151516 % 3+ 3PM Hit Rate (Last 5 Games): 40.0 % 3+ 3PM Hit Rate (Last 10 Games): 50.0 % 4+ 3PM Hit Rate (Season): 30.30303030303030305 % 4+ 3PM Hit Rate (Last 5 Games): 40.0 % 4+ 3PM Hit Rate (Last 10 Games): 30.0 % 5+ 3PM Hit Rate (Season): 18,181818181818183 % 5+ 3PM Hit Rate (Last 5 Games): 20.0 % 5+ 3PM Hit Rate (Last 10 Games): 20.0 %

Hit Rate %s for Points

In [17]: fifteen pts count = sum(game['points scored'] >= 15 for game in moredata fifteen pts last5 count = sum(game['points scored'] >= 15 for game in mo fifteen\_pts\_percentage = (fifteen\_pts\_count / total\_games) \* 100 fifteen\_pts\_last5\_percentage = (fifteen\_pts\_last5\_count / last\_5\_games) = fifteen pts last10 count = sum(game['points scored'] >= 15 for game in me fifteen pts last10 percentage = (fifteen pts last10 count / last 10 game twenty pts count = sum(game['points scored'] >= 20 for game in moredata) twenty pts last5 count = sum(game['points scored'] >= 20 for game in more twenty\_pts\_percentage = (twenty\_pts\_count / total\_games) \* 100 twenty pts last5 percentage = (twenty pts last5 count / last 5 games) \* twenty\_pts\_last10\_count = sum(game['points\_scored'] >= 20 for game in mo twenty pts last10 percentage = (twenty pts last10 count / last 10 games) twofive pts count = sum(game['points scored'] >= 25 for game in moredata twofive\_pts\_last5\_count = sum(game['points\_scored'] >= 25 for game in mo twofive pts percentage = (twofive pts count / total games) \* 100 twofive pts last5 percentage = (twofive pts last5 count / last 5 games)  $\approx$ twofive pts last10 count = sum(game['points scored'] >= 25 for game in m twofive pts last10 percentage = (twofive pts last10 count / last 10 games thirty\_pts\_count = sum(game['points\_scored'] >= 30 for game in moredata) thirty pts last5 count = sum(game['points scored'] >= 30 for game in more thirty\_pts\_percentage = (thirty\_pts\_count / total\_games) \* 100 thirty pts last5 percentage = (thirty pts last5 count / last 5 games) \* thirty\_pts\_last10\_count = sum(game['points\_scored'] >= 30 for game in mo thirty pts last10 percentage = (thirty pts last10 count / last 10 games) print('Points Hit Rate Percentage') print() print("Player: ", PlayerName) print() print() print("Points Milestones:") print() print() print("15+ Points Hit Rate (Season): ",fifteen pts percentage) print() print("15+ Points Hit Rate (Last 5 Games): ",fifteen pts last5 percentage print() print("15+ Points Hit Rate (Last 10 Games): ",fifteen\_pts\_last10\_percent; print() print() print("20+ Points Hit Rate (Season): ",twenty\_pts\_percentage) print() print("20+ Points Hit Rate (Last 5 Games): ",twenty\_pts\_last5\_percentage print() print("20+ Points Hit Rate (Last 10 Games): ",twenty\_pts\_last10\_percenta print() print() print("25+ Points Hit Rate (Season): ",twofive\_pts\_percentage) print() print("25+ Points Hit Rate (Last 5 Games): ",twofive\_pts\_last5\_percentage print() print("25+ Points Hit Rate (Last 10 Games): ",twofive pts last10 percent; print() print()

```
print("30+ Points Hit Rate (Season): ",thirty_pts_percentage)
print()
print("30+ Points Hit Rate (Last 5 Games): ",thirty_pts_last5_percentage
print()
print("30+ Points Hit Rate (Last 10 Games): ",thirty_pts_last10_percentage
print()
print()
Points Hit Rate Percentage
Player: Damian Lillard
Points Milestones:
15+ Points Hit Rate (Season): 88.0
15+ Points Hit Rate (Last 5 Games):
                                    80.0
15+ Points Hit Rate (Last 10 Games): 90.0
20+ Points Hit Rate (Season): 70.0
20+ Points Hit Rate (Last 5 Games): 40.0
20+ Points Hit Rate (Last 10 Games): 60.0
25+ Points Hit Rate (Season): 54.0
25+ Points Hit Rate (Last 5 Games): 40.0
25+ Points Hit Rate (Last 10 Games): 50.0
30+ Points Hit Rate (Season): 28,000000000000004
30+ Points Hit Rate (Last 5 Games): 20.0
30+ Points Hit Rate (Last 10 Games): 10.0
```

## Rebound Hit Rate %s

In	[18]:	def	<pre>rebounds_count(min_rebounds): return sum((game['offensive_rebounds'] + game['defensive_rebounds'])</pre>
		def	<pre>rebounds_last5_count(min_rebounds): return sum((game['offensive_rebounds'] + game['defensive_rebounds'])</pre>
		def	<pre>rebounds_last10_count(min_rebounds): return sum((game['offensive_rebounds'] + game['defensive_rebounds'])</pre>

```
In [21]: four rebounds percentage = (rebounds count(4) / total games) * 100
         four rebounds last5 percentage = (rebounds last5 count(4) / last 5 games
         four rebounds last10 percentage = (rebounds last10 count(4) / last 10 ga
         six rebounds percentage = (rebounds count(6) / total games) * 100
         six rebounds last5 percentage = (rebounds last5 count(6) / last 5 games)
         six_rebounds_last10_percentage = (rebounds_last10_count(6) / last_10_gam
         eight rebounds percentage = (rebounds count(8) / total games) * 100
         eight_rebounds_last5_percentage = (rebounds_last5_count(8) / last_5_game
         eight rebounds last10 percentage = (rebounds last10 count(8) / last 10 q
         ten rebounds percentage = (rebounds count(10) / total games) * 100
         ten rebounds last5 percentage = (rebounds last5 count(10) / last 5 games
         ten rebounds last10 percentage = (rebounds last10 count(10) / last 10 ga
         print('Rebounds: ')
         print()
         print()
         print("4+: ",four_rebounds_percentage)
         print()
         print('Last 5: ',four_rebounds_last5_percentage)
         print()
         print('Last 10: ',four rebounds last10 percentage)
         print()
         print()
         print("6+: ",six rebounds percentage)
         print()
         print('Last 5: ',six rebounds last5 percentage)
         print()
         print('Last 10: ',six rebounds last10 percentage)
         print()
         print()
         print("8+: ",eight rebounds percentage)
         print()
         print('Last 5: ',eight_rebounds_last5_percentage)
         print()
         print('Last 10: ',eight_rebounds_last10_percentage)
         print()
         print()
         print("10+: ",ten rebounds percentage)
         print()
         print('Last 5: ',ten rebounds last5 percentage)
         print()
         print('Last 10: ',ten_rebounds_last10_percentage)
         print()
         print()
```

Rebounds:

4+: 72.09302325581395

Last 5: 80.0

Last 10: 310.0

6+: 44.18604651162791

Last 5: 20.0

Last 10: 190.0

8+: 18.6046511627907

Last 5: 20.0

Last 10: 80.0

10+: 6.976744186046512

Last 5: 0.0

Last 10: 30.0

In []: