

IPL Dataset Analysis using numpy & matplotlib

```
In [9]: # Import Numpy
import numpy as np
```

```
In [10]: #Seasons
Seasons = ["2015", "2016", "2017", "2018", "2019", "2020", "2021", "2022", "2023", "2024"]
Sdict = {"2015":0, "2016":1, "2017":2, "2018":3, "2019":4, "2020":5, "2021":6, "2022":7, "2023":8, "2024":9}
```

```
In [11]: #Players
Players = ["Sachin", "Rahul", "Smith", "Sami", "Pollard", "Morris", "Samson", "Dhoni", "Kohli", "Sky"]
Pdict = {"Sachin":0, "Rahul":1, "Smith":2, "Sami":3, "Pollard":4, "Morris":5, "Samson":6, "Dhoni":7, "Kohli":8, "Sky":9}
```

```
In [12]: #Salaries
Sachin_Salary = [15946875, 17718750, 19490625, 21262500, 23034375, 24806250, 25240000, 26000000, 26500000, 27000000]
Rahul_Salary = [12000000, 12744189, 13488377, 14232567, 14976754, 16324500, 18038000, 19000000, 19500000, 20000000]
Smith_Salary = [4621800, 5828090, 13041250, 14410581, 15779912, 14500000, 16022500, 17000000, 17500000, 18000000]
Sami_Salary = [3713640, 4694041, 13041250, 14410581, 15779912, 17149243, 18518574, 19500000, 20000000, 20500000]
Pollard_Salary = [4493160, 4806720, 6061274, 13758000, 15202590, 16647180, 18091700, 19000000, 19500000, 20000000]
Morris_Salary = [3348000, 4235220, 12455000, 14410581, 15779912, 14500000, 16022500, 17000000, 17500000, 18000000]
Samson_Salary = [3144240, 3380160, 3615960, 4574189, 13520500, 14940153, 16359805, 17000000, 17500000, 18000000]
Dhoni_Salary = [0, 0, 4171200, 4484040, 4796880, 6053663, 15506632, 16669630, 17832000, 18000000]
Kohli_Salary = [0, 0, 0, 4822800, 5184480, 5546160, 6993708, 16402500, 17632688, 18000000]
Sky_Salary = [3031920, 3841443, 13041250, 14410581, 15779912, 14200000, 15691000, 16000000, 16500000, 17000000]
#Matrix
Salary = np.array([Sachin_Salary, Rahul_Salary, Smith_Salary, Sami_Salary, Pollard_Salary, Morris_Salary, Samson_Salary, Dhoni_Salary, Kohli_Salary, Sky_Salary])
```

```
In [13]: #Games
Sachin_G = [80, 77, 82, 82, 73, 82, 58, 78, 6, 35]
Rahul_G = [82, 57, 82, 79, 76, 72, 60, 72, 79, 80]
Smith_G = [79, 78, 75, 81, 76, 79, 62, 76, 77, 69]
Sami_G = [80, 65, 77, 66, 69, 77, 55, 67, 77, 40]
Pollard_G = [82, 82, 82, 79, 82, 78, 54, 76, 71, 41]
Morris_G = [70, 69, 67, 77, 70, 77, 57, 74, 79, 44]
Samson_G = [78, 64, 80, 78, 45, 80, 60, 70, 62, 82]
Dhoni_G = [35, 35, 80, 74, 82, 78, 66, 81, 81, 27]
Kohli_G = [40, 40, 40, 81, 78, 81, 39, 0, 10, 51]
Sky_G = [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]
#Matrix
Games = np.array([Sachin_G, Rahul_G, Smith_G, Sami_G, Pollard_G, Morris_G, Samson_G, Dhoni_G, Kohli_G, Sky_G])
```

```
In [14]: #Points
Sachin_PTS = [2832,2430,2323,2201,1970,2078,1616,2133,83,782]
Rahul_PTS = [1653,1426,1779,1688,1619,1312,1129,1170,1245,1154]
Smith_PTS = [2478,2132,2250,2304,2258,2111,1683,2036,2089,1743]
Sami_PTS = [2122,1881,1978,1504,1943,1970,1245,1920,2112,966]
Pollard_PTS = [1292,1443,1695,1624,1503,1784,1113,1296,1297,646]
Morris_PTS = [1572,1561,1496,1746,1678,1438,1025,1232,1281,928]
Samson_PTS = [1258,1104,1684,1781,841,1268,1189,1186,1185,1564]
Dhoni_PTS = [903,903,1624,1871,2472,2161,1850,2280,2593,686]
Kohli_PTS = [597,597,597,1361,1619,2026,852,0,159,904]
Sky_PTS = [2040,1397,1254,2386,2045,1941,1082,1463,1028,1331]
#Matrix
Points = np.array([Sachin_PTS, Rahul_PTS, Smith_PTS, Sami_PTS, Pollard_PTS,
```

```
In [15]: Salary
```

```
Out[15]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
 25244493, 27849149, 30453805, 23500000],
 [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
 18038573, 19752645, 21466718, 23180790],
 [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
 16022500, 17545000, 19067500, 20644400],
 [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
 18518574, 19450000, 22407474, 22458000],
 [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
 18091770, 19536360, 20513178, 21436271],
 [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
 16022500, 17545000, 19067500, 20644400],
 [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
 16359805, 17779458, 18668431, 20068563],
 [      0,      0,  4171200,  4484040,  4796880,  6053663,
 15506632, 16669630, 17832627, 18995624],
 [      0,      0,      0,  4822800,  5184480,  5546160,
 6993708, 16402500, 17632688, 18862875],
 [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
 15691000, 17182000, 18673000, 15000000]])
```

```
In [16]: Games
```

```
Out[16]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
 [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
 [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
 [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
 [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
 [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
 [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
 [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
 [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
 [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [17]: Points
```

```
Out[17]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782],
               [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],
               [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],
               [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],
               [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],
               [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],
               [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564],
               [ 903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],
               [ 597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904],
               [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [18]: mat=np.arange(0,20)
mat
```

```
Out[18]: array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16,
               17, 18, 19])
```

```
In [19]: mat1=np.reshape(mat,(5,4),order='F')
mat1
```

```
Out[19]: array([[ 0,  5, 10, 15],
               [ 1,  6, 11, 16],
               [ 2,  7, 12, 17],
               [ 3,  8, 13, 18],
               [ 4,  9, 14, 19]])
```

```
In [26]: mat2=np.reshape(mat,(5,4),order='C')
mat2
```

```
Out[26]: array([[ 0,  1,  2,  3],
               [ 4,  5,  6,  7],
               [ 8,  9, 10, 11],
               [12, 13, 14, 15],
               [16, 17, 18, 19]])
```

```
In [27]: a1=[('welcome','to','datascience')] #we can store char in matrix
a2=[('required','hard','work')]
a3=[(1,2,3)]
a1,a2,a3
```

```
Out[27]: ([('welcome', 'to', 'datascience')],
          [('required', 'hard', 'work')],
          [(1, 2, 3)])
```

```
In [28]: np.array([a1,a2,a3])
```

```
Out[28]: array([['welcome', 'to', 'datascience'],
               ['required', 'hard', 'work']],
              dtype='<U11')
```

```
In [29]: Games
```

```
Out[29]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
                [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
                [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
                [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
                [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
                [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
                [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
                [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [30]: Games[:]
```

```
Out[30]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
                [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
                [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
                [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
                [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
                [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
                [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
                [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [31]: Games[0:5]
```

```
Out[31]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
                [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
                [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
                [82, 82, 82, 79, 82, 78, 54, 76, 71, 41]])
```

```
In [32]: Games[0]
```

```
Out[32]: array([80, 77, 82, 82, 73, 82, 58, 78,  6, 35])
```

```
In [34]: Games[-1:-5]
```

```
Out[34]: array([], shape=(0, 10), dtype=int32)
```

```
In [35]: Games[-2:-6]
```

```
Out[35]: array([], shape=(0, 10), dtype=int32)
```

```
In [36]: Games[-1]
```

```
Out[36]: array([75, 51, 51, 79, 77, 76, 49, 69, 54, 62])
```

```
In [37]: Games[-1,-3]
```

```
Out[37]: 69
```

```
In [38]: Games[1:2]
```

```
Out[38]: array([[82, 57, 82, 79, 76, 72, 60, 72, 79, 80]])
```

```
In [39]: Games[-3:-1]
```

```
Out[39]: array([[35, 35, 80, 74, 82, 78, 66, 81, 81, 27],  
                [40, 40, 40, 81, 78, 81, 39, 0, 10, 51]])
```

```
In [40]: Games[2,8]
```

```
Out[40]: 77
```

```
In [41]: Points
```

```
Out[41]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782],  
                [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],  
                [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],  
                [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],  
                [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],  
                [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],  
                [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564],  
                [ 903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],  
                [ 597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904],  
                [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [42]: Points[0]
```

```
Out[42]: array([2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782])
```

```
In [43]: Points[:]
```

```
Out[43]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782],  
                [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],  
                [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],  
                [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],  
                [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],  
                [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],  
                [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564],  
                [ 903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],  
                [ 597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904],  
                [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [44]: Points[6,1]
```

```
Out[44]: 1104
```

```
In [45]: Points[-6,-1]
```

```
Out[45]: 646
```

```
In [46]: Pdict
```

```
Out[46]: {'Sachin': 0,
          'Rahul': 1,
          'Smith': 2,
          'Sami': 3,
          'Pollard': 4,
          'Morris': 5,
          'Samson': 6,
          'Dhoni': 7,
          'Kohli': 8,
          'Sky': 9}
```

```
In [47]: Pdict['Sachin']
```

```
Out[47]: 0
```

```
In [48]: Pdict['Dhoni']
```

```
Out[48]: 7
```

```
In [49]: Games[Pdict['Smith']]
```

```
Out[49]: array([79, 78, 75, 81, 76, 79, 62, 76, 77, 69])
```

Games

```
In [50]: Salary
```

```
Out[50]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                  25244493, 27849149, 30453805, 23500000],
                 [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                  18038573, 19752645, 21466718, 23180790],
                 [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                 [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
                  18518574, 19450000, 22407474, 22458000],
                 [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
                  18091770, 19536360, 20513178, 21436271],
                 [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                 [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
                  16359805, 17779458, 18668431, 20068563],
                 [      0,      0,  4171200,  4484040,  4796880,  6053663,
                  15506632, 16669630, 17832627, 18995624],
                 [      0,      0,      0,  4822800,  5184480,  5546160,
                  6993708, 16402500, 17632688, 18862875],
                 [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
                  15691000, 17182000, 18673000, 15000000]])
```

In [51]: Games

```
Out[51]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
                [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
                [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
                [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
                [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
                [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
                [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
                [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

In [53]: Points

```
Out[53]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133,  83, 782],
                [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],
                [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],
                [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112,  966],
                [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297,  646],
                [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281,  928],
                [1258, 1104, 1684, 1781,  841, 1268, 1189, 1186, 1185, 1564],
                [ 903,  903, 1624, 1871, 2472, 2161, 1850, 2280, 2593,  686],
                [ 597,  597,  597, 1361, 1619, 2026,  852,  0, 159,  904],
                [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [54]: Salary/Games
```

```
C:\Users\Sandeep\AppData\Local\Temp\ipykernel_33120\3709746658.py:1: RuntimeWarning: divide by zero encountered in divide
Salary/Games
```

```
Out[54]: array([[ 199335.9375      ,  230113.63636364,  237690.54878049,
  259298.7804878 ,  315539.38356164,  302515.24390244,
  435249.87931034,  357040.37179487,  5075634.16666667,
  671428.57142857],
 [ 146341.46341463,  223582.26315789,  164492.40243902,
  180159.07594937,  197062.55263158,  226729.16666667,
  300642.88333333,  274342.29166667,  271730.60759494,
  289759.875      ],
 [  58503.79746835,   74719.1025641 ,  173883.33333333,
  177908.40740741,  207630.42105263,  183544.30379747,
  258427.41935484,  230855.26315789,  247629.87012987,
  299194.20289855],
 [   46420.5      ,   72216.01538462,  169366.88311688,
  218342.13636364,  228694.37681159,  222717.44155844,
  336701.34545455,  290298.50746269,  291006.15584416,
  561450.      ],
 [  54794.63414634,   58618.53658537,   73917.97560976,
  174151.89873418,  185397.43902439,  213425.38461538,
  335032.77777778,  257057.36842105,  288918.      ,
  522835.87804878],
 [  47828.57142857,   61380.      ,  185895.52238806,
  187150.4025974 ,  225427.31428571,  188311.68831169,
  281096.49122807,  237094.59459459,  241360.75949367,
  469190.90909091],
 [  40310.76923077,   52815.      ,   45199.5      ,
   58643.44871795,  300455.55555556,  186751.9125      ,
  272663.41666667,  253992.25714286,  301103.72580645,
  244738.57317073],
 [      0.      ,      0.      ,   52140.      ,
   60595.13513514,   58498.53658537,   77611.06410256,
  234948.96969697,  205797.90123457,  220155.88888889,
  703541.62962963],
 [      0.      ,      0.      ,      0.      ,
   59540.74074074,   66467.69230769,   68471.11111111,
  179325.84615385,      inf, 1763268.8      ,
  369860.29411765],
 [  40425.6      ,   75322.41176471,  255710.78431373,
  182412.41772152,  204933.92207792,  186842.10526316,
  320224.48979592,  249014.49275362,  345796.2962963 ,
  241935.48387097]])
```

```
In [55]: import warnings
warnings.filterwarnings('ignore')
```



```
In [56]: np.round(Salary/Games)
```

```
Out[56]: array([[ 199336.,  230114.,  237691.,  259299.,  315539.,  302515.,
                  435250.,  357040.,  5075634.,  671429.],
                 [ 146341.,  223582.,  164492.,  180159.,  197063.,  226729.,
                  300643.,  274342.,  271731.,  289760.],
                 [  58504.,   74719.,  173883.,  177908.,  207630.,  183544.,
                  258427.,  230855.,  247630.,  299194.],
                 [  46420.,   72216.,  169367.,  218342.,  228694.,  222717.,
                  336701.,  290299.,  291006.,  561450.],
                 [  54795.,   58619.,   73918.,  174152.,  185397.,  213425.,
                  335033.,  257057.,  288918.,  522836.],
                 [  47829.,   61380.,  185896.,  187150.,  225427.,  188312.,
                  281096.,  237095.,  241361.,  469191.],
                 [  40311.,   52815.,   45200.,   58643.,  300456.,  186752.,
                  272663.,  253992.,  301104.,  244739.],
                 [    0.,    0.,   52140.,   60595.,   58499.,   77611.,
                  234949.,  205798.,  220156.,  703542.],
                 [    0.,    0.,    0.,   59541.,   66468.,   68471.,
                  179326.,   inf,  1763269.,  369860.],
                 [  40426.,   75322.,  255711.,  182412.,  204934.,  186842.,
                  320224.,  249014.,  345796.,  241935.]])
```

```
In [58]: import matplotlib.pyplot as plt
```

```
In [59]: %matplotlib inline
```

```
In [60]: Salary
```

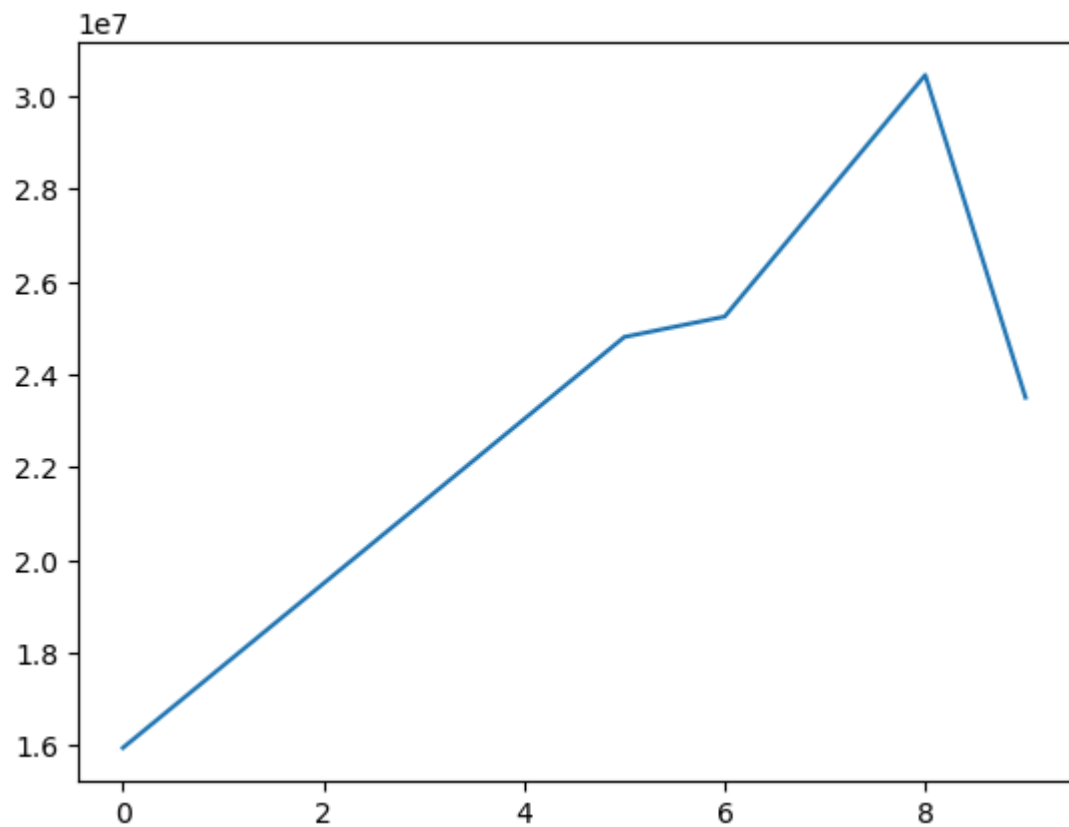
```
Out[60]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                  25244493, 27849149, 30453805, 23500000],
                 [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                  18038573, 19752645, 21466718, 23180790],
                 [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                 [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
                  18518574, 19450000, 22407474, 22458000],
                 [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
                  18091770, 19536360, 20513178, 21436271],
                 [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                 [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
                  16359805, 17779458, 18668431, 20068563],
                 [    0,    0,  4171200,  4484040,  4796880,  6053663,
                  15506632, 16669630, 17832627, 18995624],
                 [    0,    0,    0,  4822800,  5184480,  5546160,
                  6993708, 16402500, 17632688, 18862875],
                 [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
                  15691000, 17182000, 18673000, 15000000]])
```

```
In [67]: Salary[0]
```

```
Out[67]: array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                  25244493, 27849149, 30453805, 23500000])
```

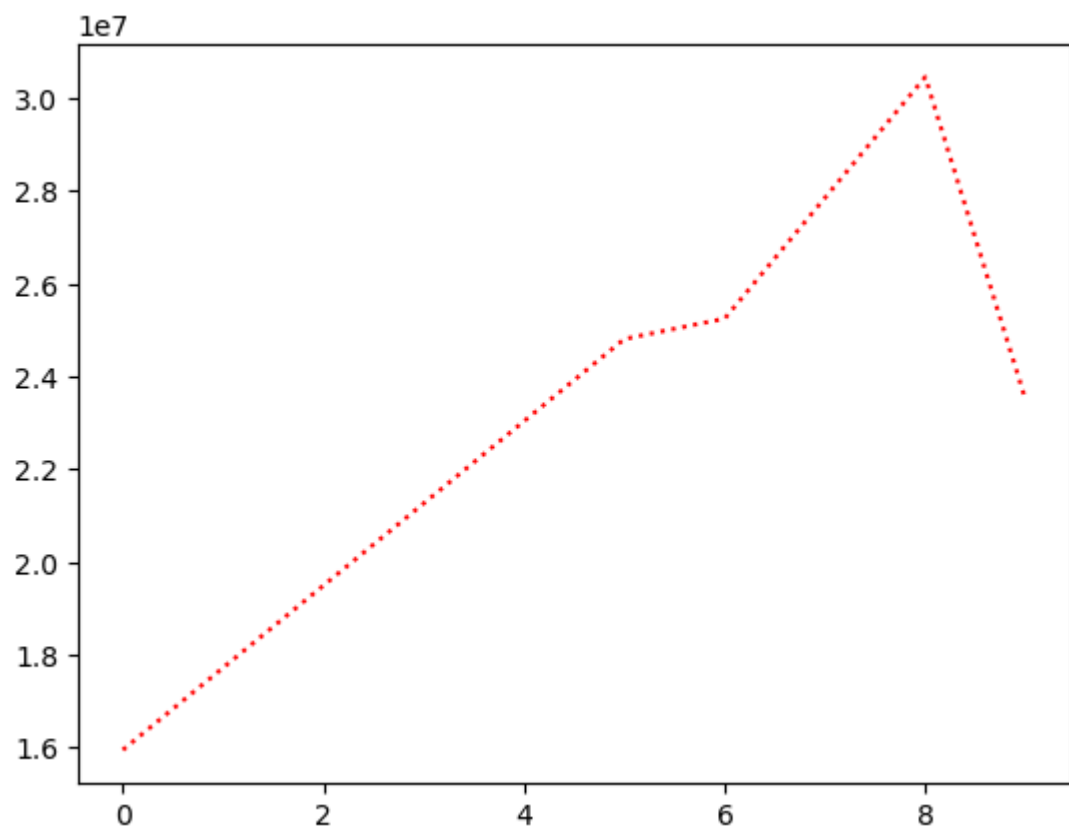
```
In [68]: plt.plot(Salary[0])
```

```
Out[68]: [<matplotlib.lines.Line2D at 0x2378f642510>]
```



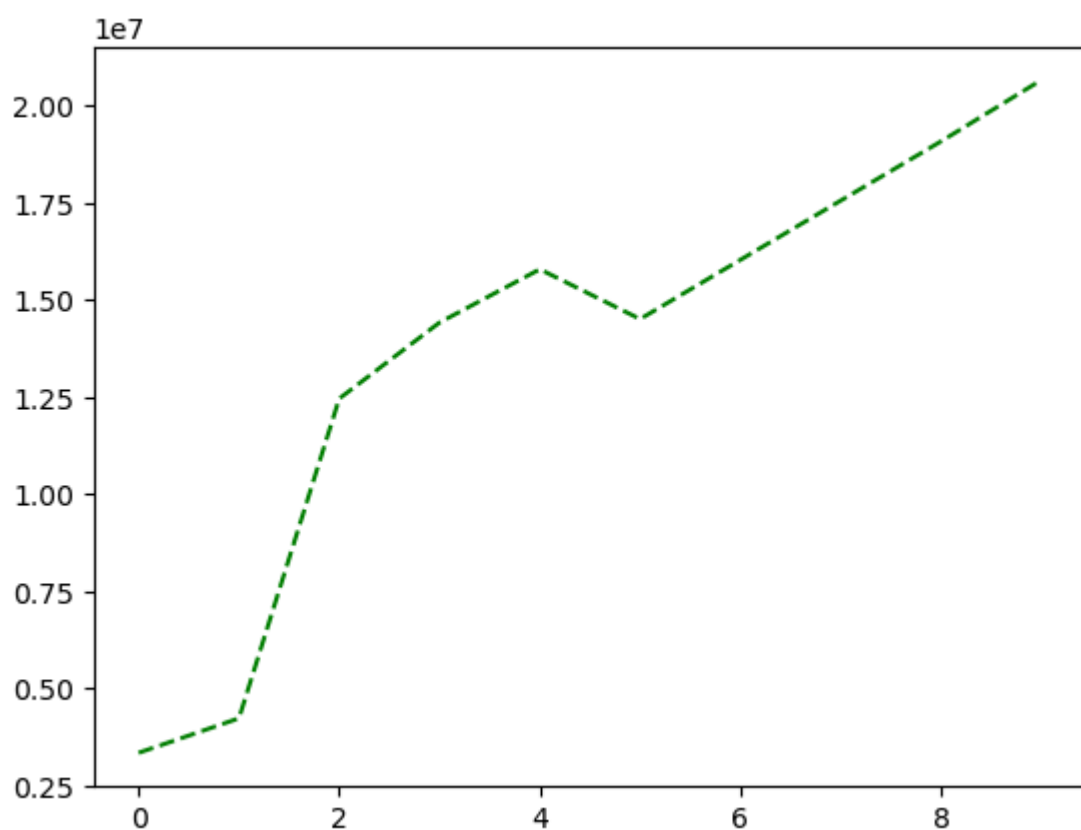
```
In [69]: plt.plot(Salary[0],color = 'red', ls = 'dotted')
```

```
Out[69]: [<matplotlib.lines.Line2D at 0x23790dd3710>]
```



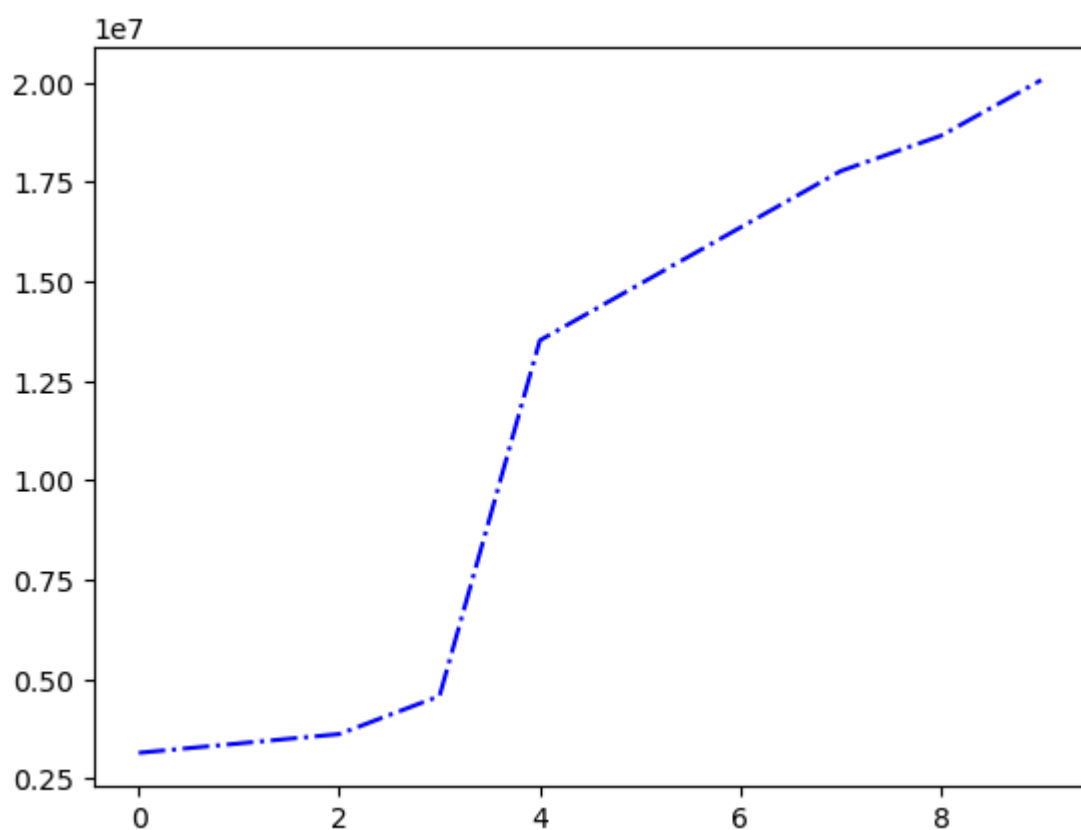
```
In [70]: plt.plot(Salary[5],color = 'green', ls = '--')
```

```
Out[70]: [<matplotlib.lines.Line2D at 0x23790e53250>]
```



```
In [71]: plt.plot(Salary[6],color = "blue",ls = "dashdot")
```

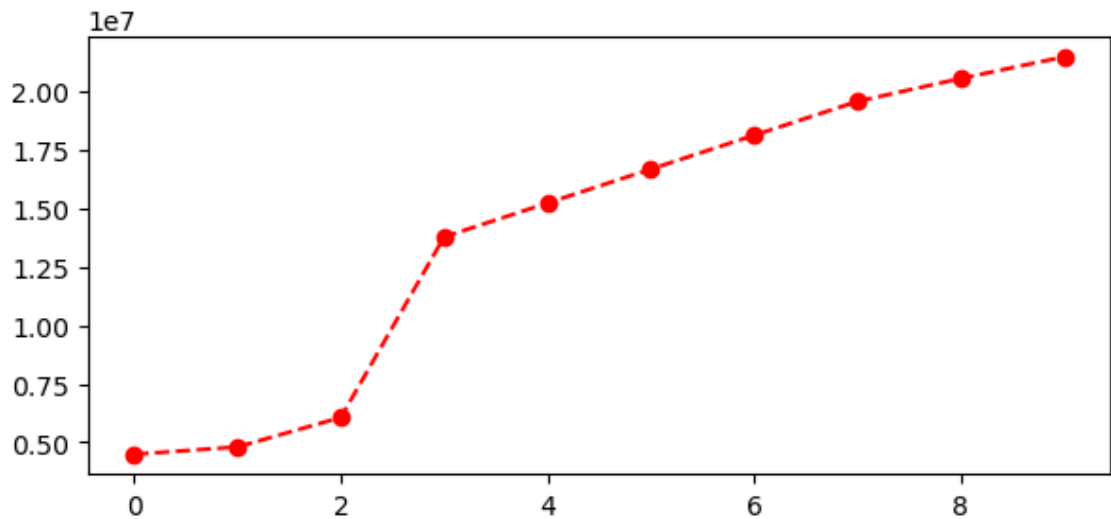
```
Out[71]: [<matplotlib.lines.Line2D at 0x237912a7810>]
```



```
In [73]: plt.rcParams['figure.figsize'] = 7,3 #(runtime configuration parameters) pr
```

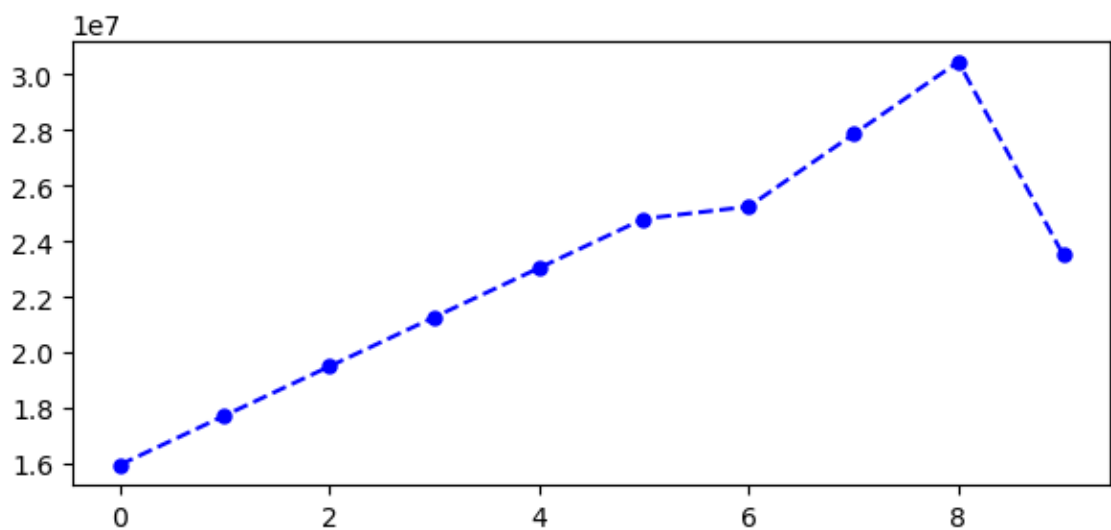
```
In [74]: plt.plot(Salary[4], color = 'red', ls = '--', marker = 'o')
```

```
Out[74]: [<matplotlib.lines.Line2D at 0x237912d3ed0>]
```



```
In [77]: plt.plot(Salary[0],color='blue',ls='--',marker='o',ms=5)
```

```
Out[77]: [<matplotlib.lines.Line2D at 0x237965a9a50>]
```



```
In [78]: list(range(0,10))
```

```
Out[78]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

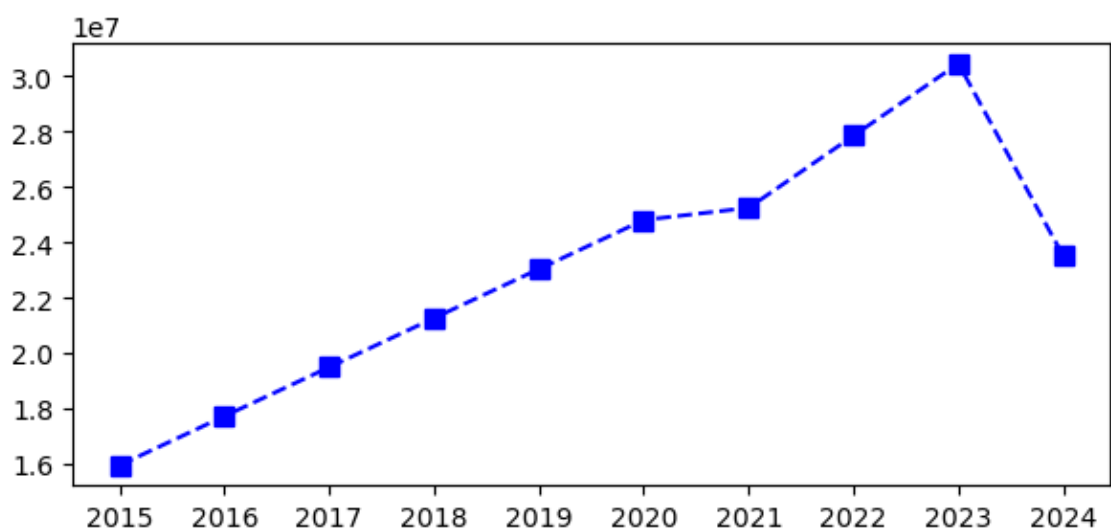
```
In [79]: Sdict
```

```
Out[79]: {'2015': 0,  
          '2016': 1,  
          '2017': 2,  
          '2018': 3,  
          '2019': 4,  
          '2020': 5,  
          '2021': 6,  
          '2022': 7,  
          '2023': 8,  
          '2024': 9}
```

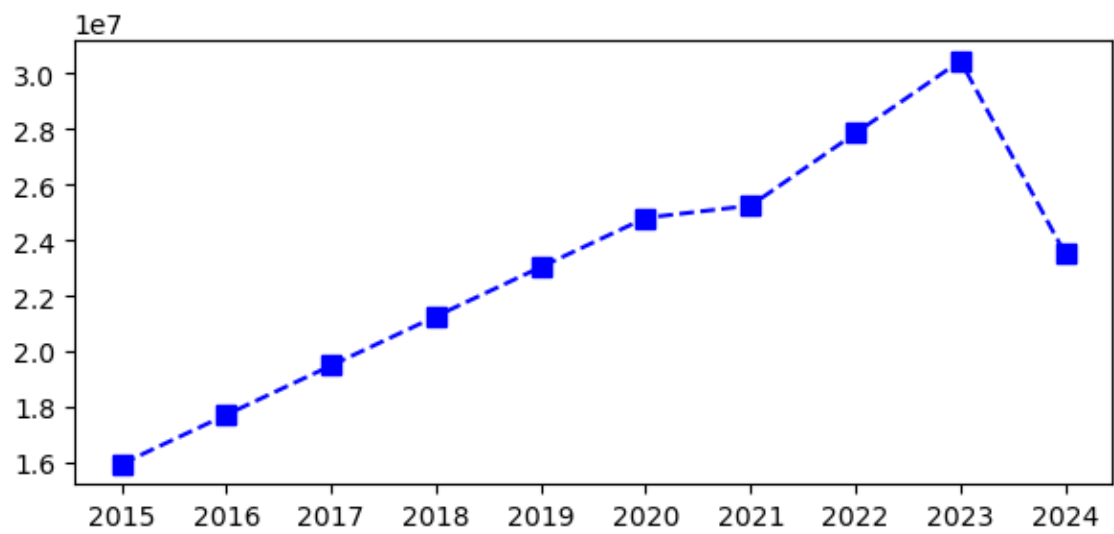
```
In [80]: Pdict
```

```
Out[80]: {'Sachin': 0,  
          'Rahul': 1,  
          'Smith': 2,  
          'Sami': 3,  
          'Pollard': 4,  
          'Morris': 5,  
          'Samson': 6,  
          'Dhoni': 7,  
          'Kohli': 8,  
          'Sky': 9}
```

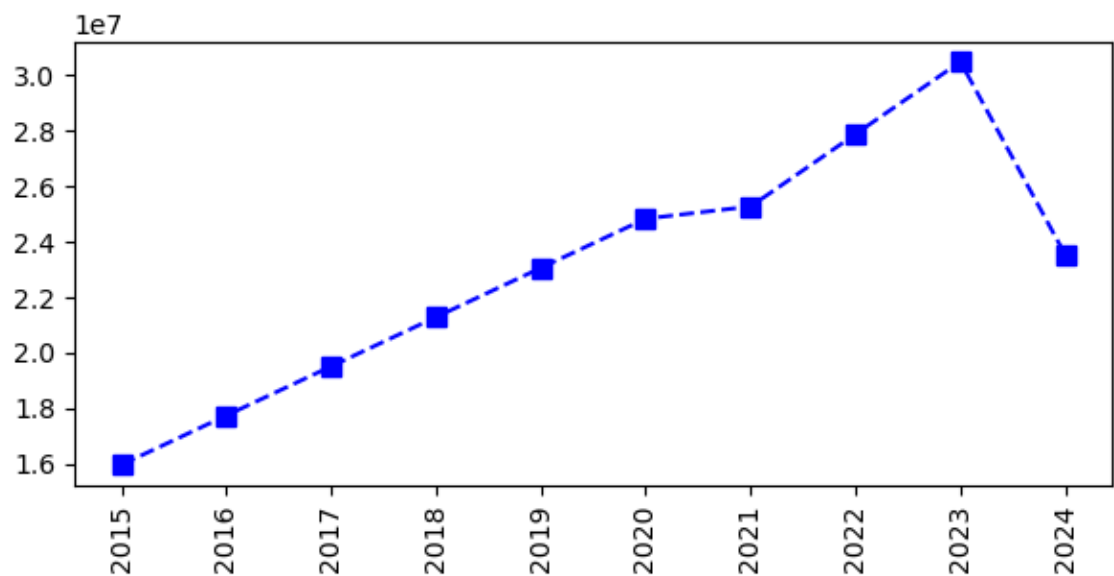
```
In [81]: plt.plot(Salary[0],c='b',ls='--',marker='s',ms=7)  
plt.xticks(list(range(0,10)),Seasons)  
plt.show()
```



```
In [82]: plt.plot(Salary[0],c='b',ls='--',marker='s',ms=7)
plt.xticks(list(range(0,10)),Seasons,rotation='horizontal')
plt.show()
```

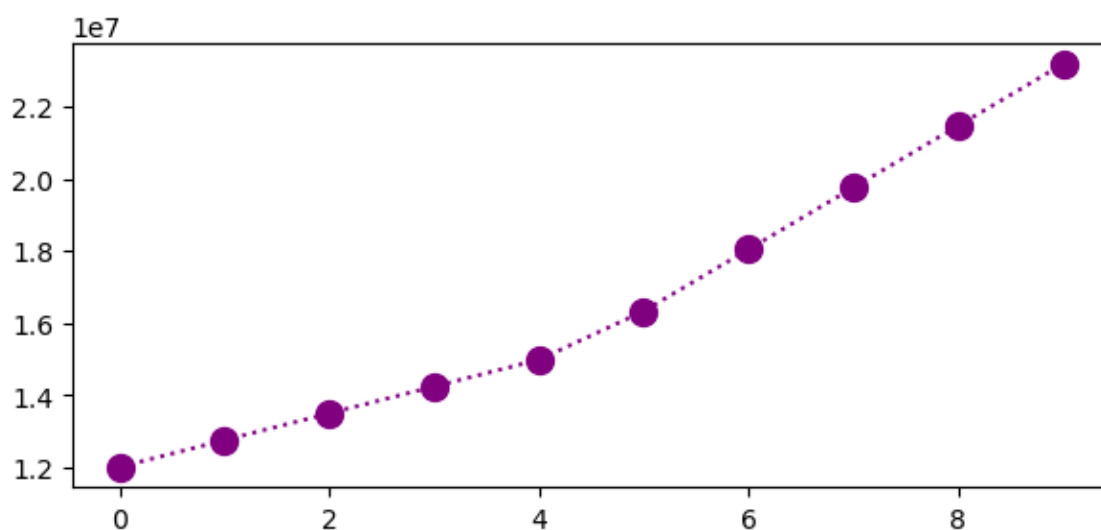


```
In [83]: plt.plot(Salary[0],c='b',ls='--',marker='s',ms=7)
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



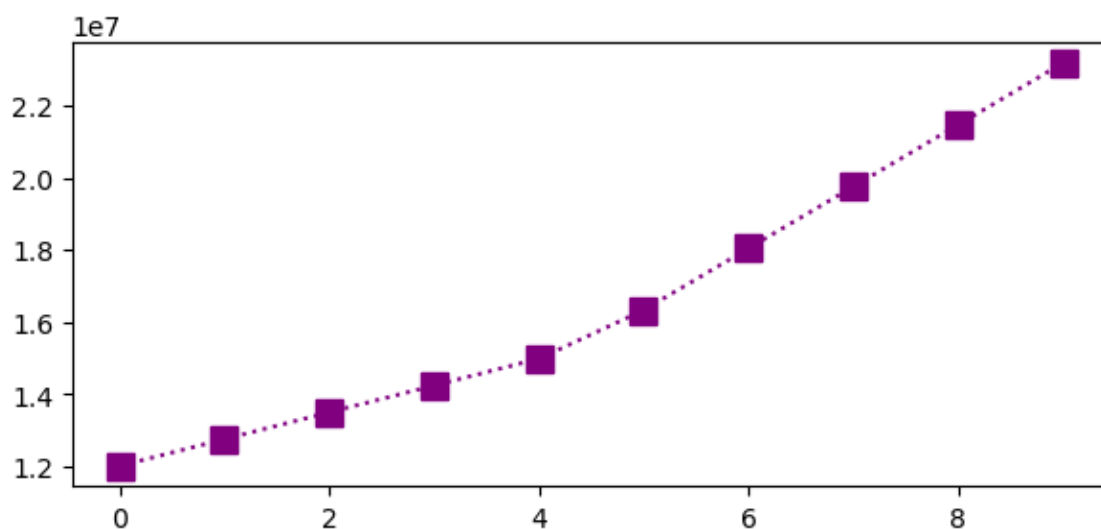
```
In [84]: plt.plot(Salary[1],c='purple',ls=':',marker='o',ms=10, label=Players[0])
```

```
Out[84]: [<matplotlib.lines.Line2D at 0x237966f7790>]
```



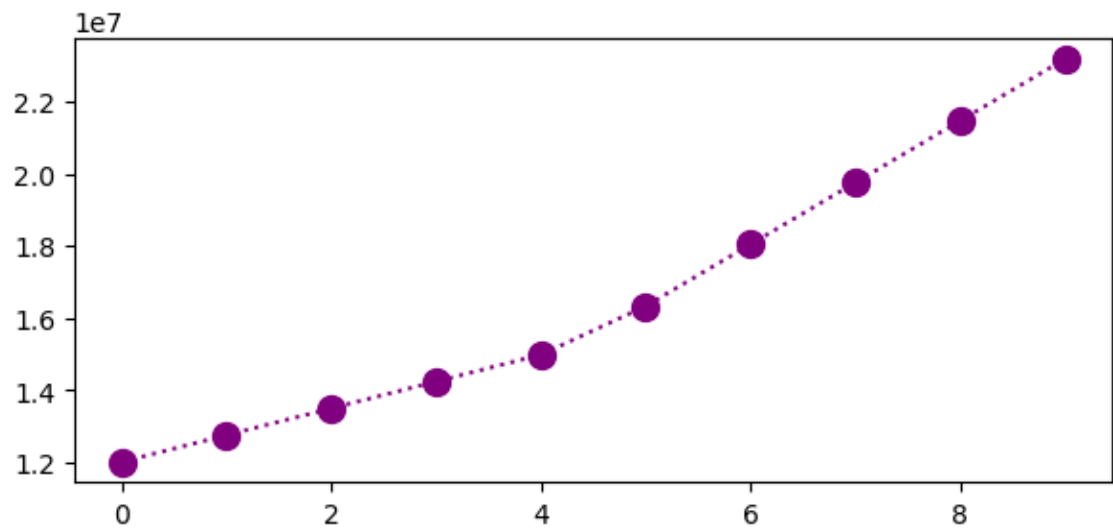
```
In [85]: plt.plot(Salary[1],c='purple',ls=':',marker='s',ms=10, label=Players[0])
```

```
Out[85]: [<matplotlib.lines.Line2D at 0x23796130510>]
```

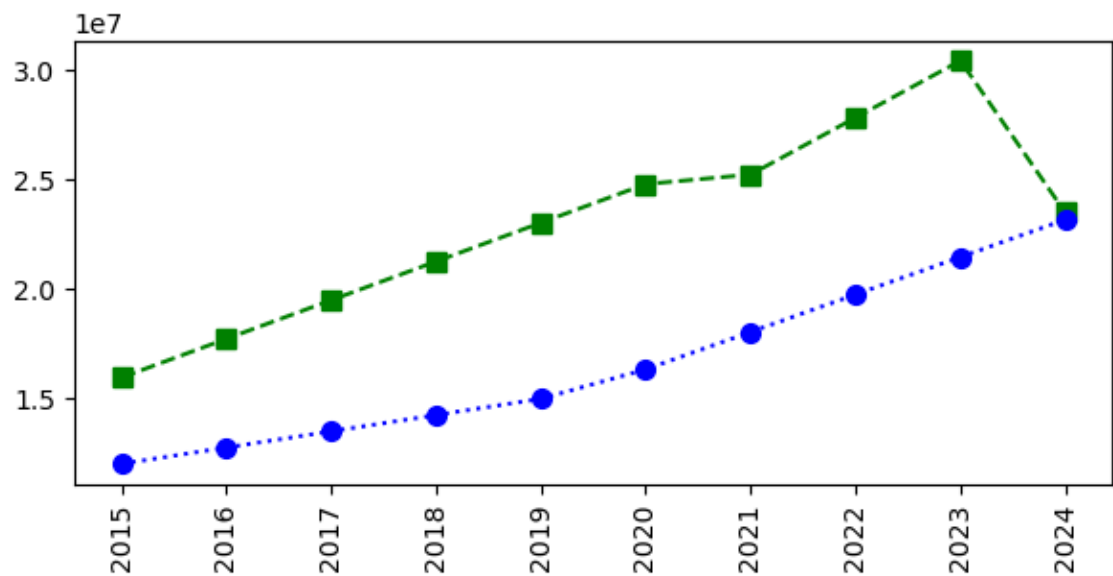


```
In [86]: plt.plot(Salary[1],c='purple',ls=':',marker='o',ms=10, label=Players[1])
```

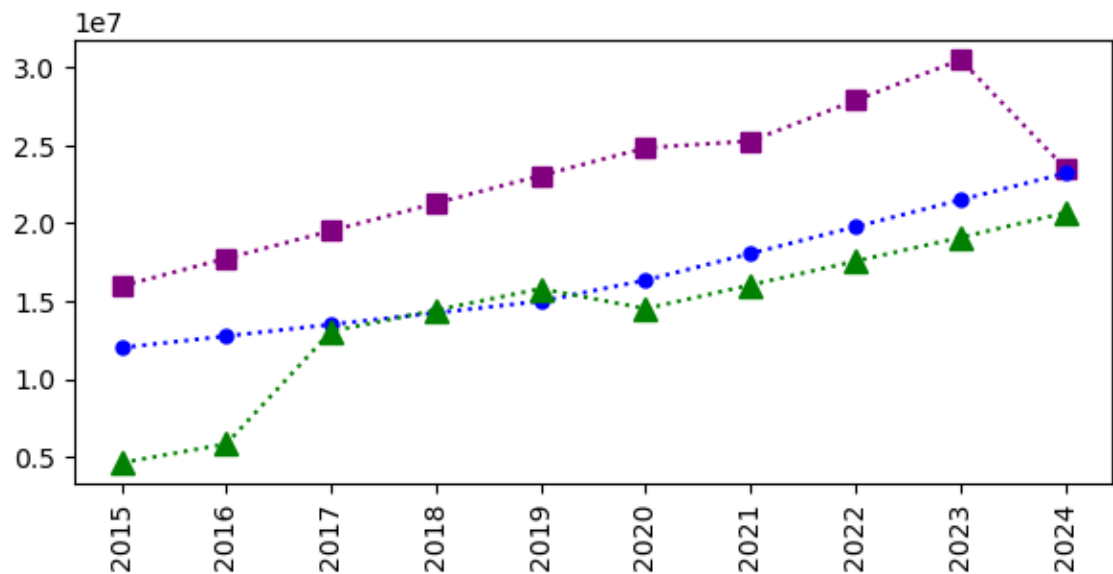
```
Out[86]: [<matplotlib.lines.Line2D at 0x237967b3f90>]
```



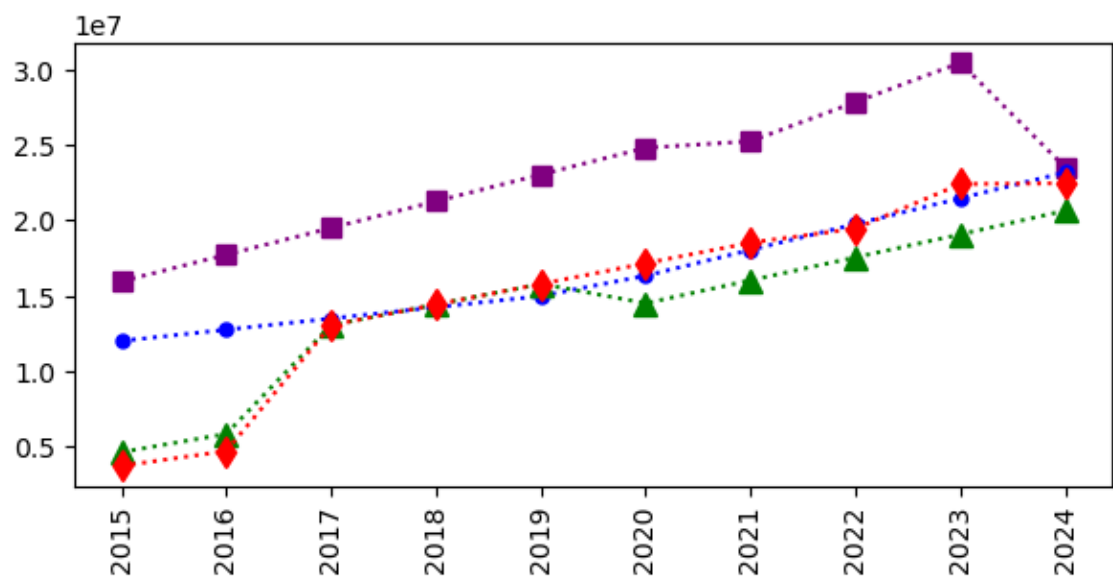
```
In [87]: plt.plot(Salary[0],c='green',ls='--',marker='s',ms=7, label=Players[0])  
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=7, label=Players[1])  
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')  
plt.show()
```



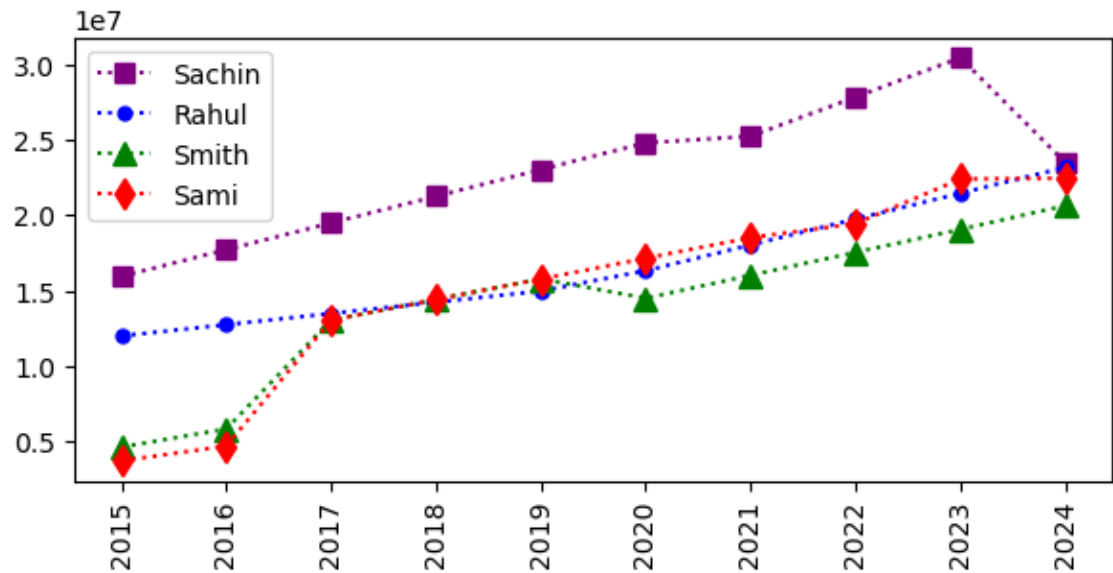

```
In [88]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



```
In [89]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=8, label=Players[3])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



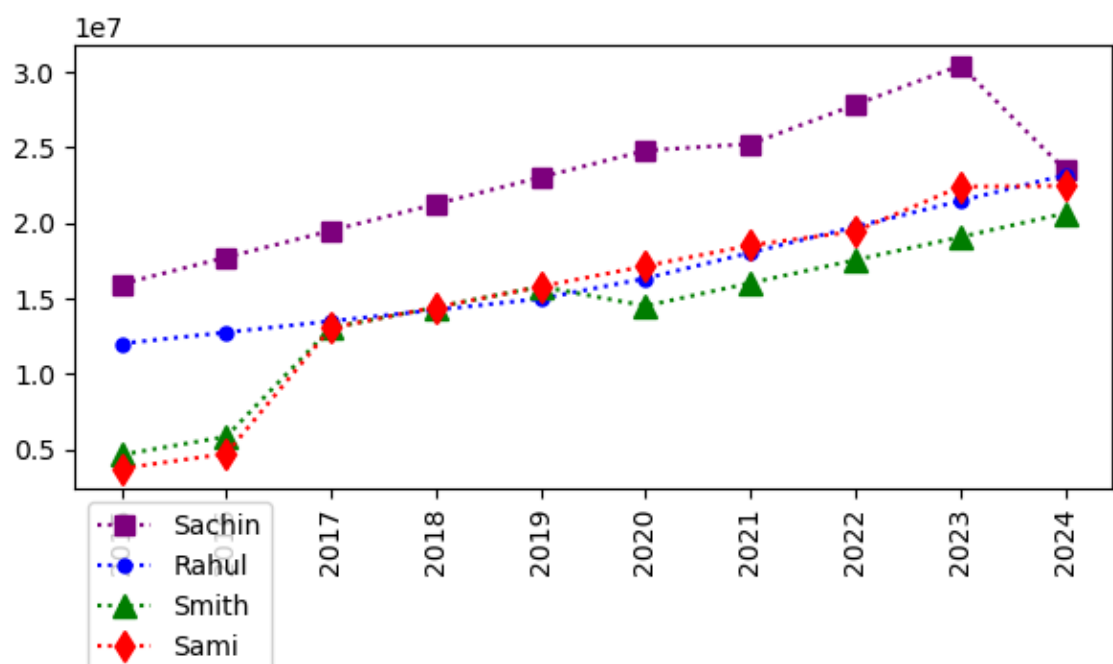
```
In [90]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=8, label=Players[3])
plt.legend()
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



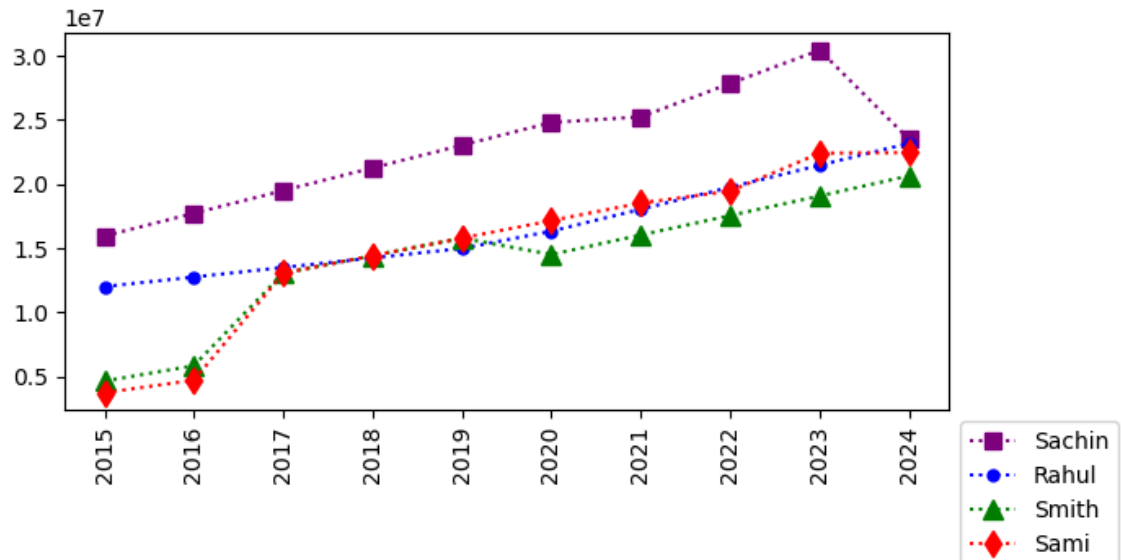
```
In [91]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=8, label=Players[3])

plt.legend(loc='upper left',bbox_to_anchor=(0,0))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')

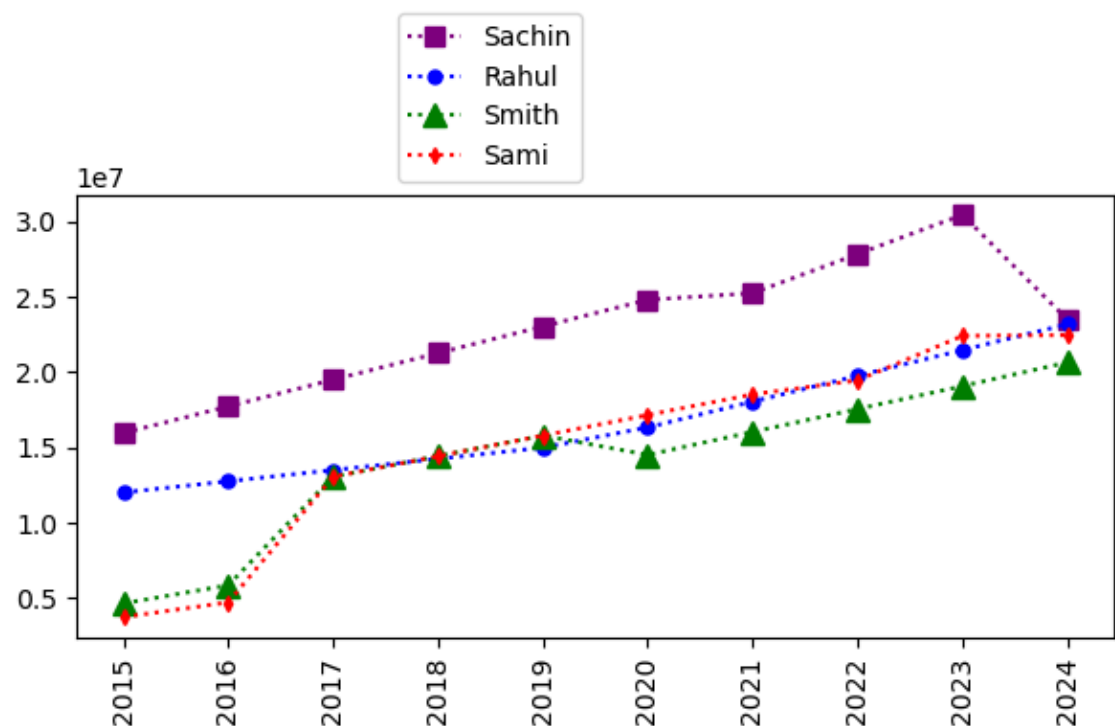
plt.show()
```



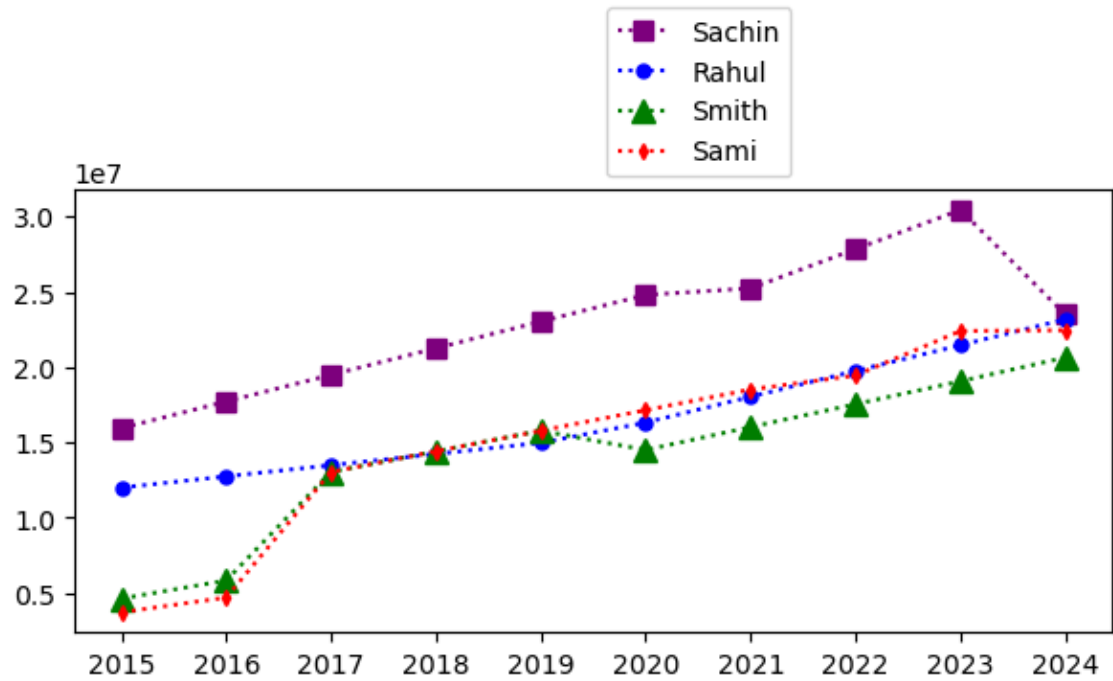
```
In [93]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=8, label=Players[3])
plt.legend(loc='upper left',bbox_to_anchor=(1,0))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



```
In [94]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=4, label=Players[3])
plt.legend(loc='lower right',bbox_to_anchor=(0.5,1))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



```
In [97]: plt.plot(Salary[0],c='purple',ls=':',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='blue',ls=':',marker='o',ms=5, label=Players[1])
plt.plot(Salary[2],c='green',ls=':',marker='^',ms=8, label=Players[2])
plt.plot(Salary[3],c='red',ls=':',marker='d',ms=4, label=Players[3])
plt.legend(loc='lower left',bbox_to_anchor=(0.5,1))
plt.xticks(list(range(0,10)),Seasons,rotation='horizontal')
plt.show()
```



In []: