Rodriguez_Felipe_DSC640_Week10-11_Code

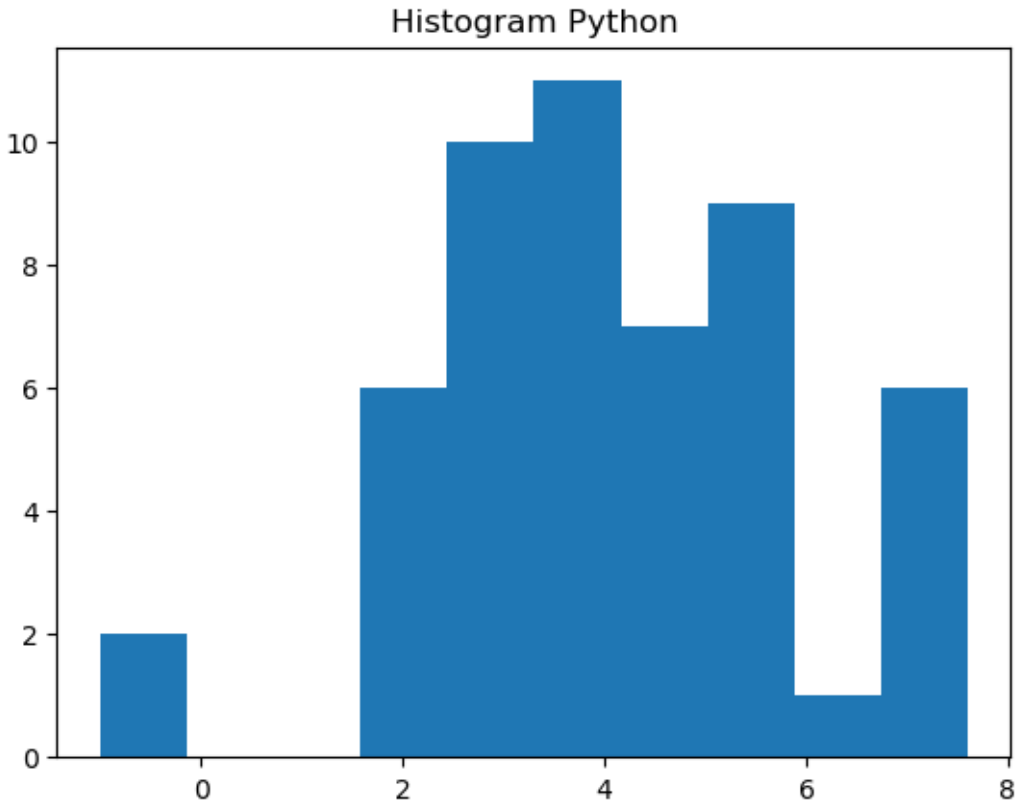
March 2, 2024

[5]:
```
import pandas as pd
import matplotlib.pyplot as plt
```

[2]:
```
df = pd.read_csv("education.csv")
```

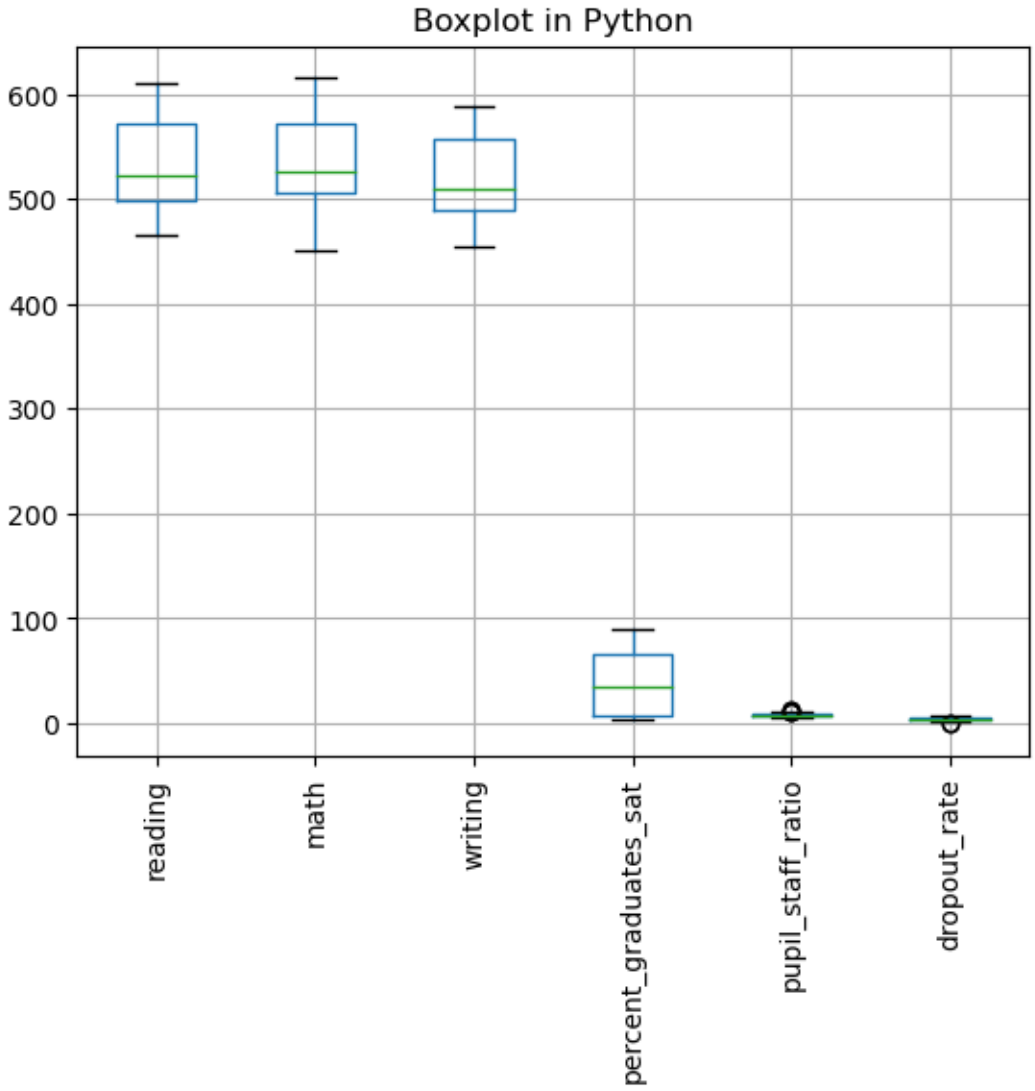
[7]:
```
plt.hist(df['dropout_rate'])
plt.title("Histogram Python")
```

[7]:
```
Text(0.5, 1.0, 'Histogram Python')
```



[9]:
```
df.boxplot()
plt.title("Boxplot in Python")
plt.xticks(rotation=90)
```

[9]:
```
(array([1, 2, 3, 4, 5, 6]),
 [Text(1, 0, 'reading'),
  Text(2, 0, 'math'),
  Text(3, 0, 'writing'),
  Text(4, 0, 'percent_graduates_sat'),
  Text(5, 0, 'pupil_staff_ratio'),
  Text(6, 0, 'dropout_rate')])
```

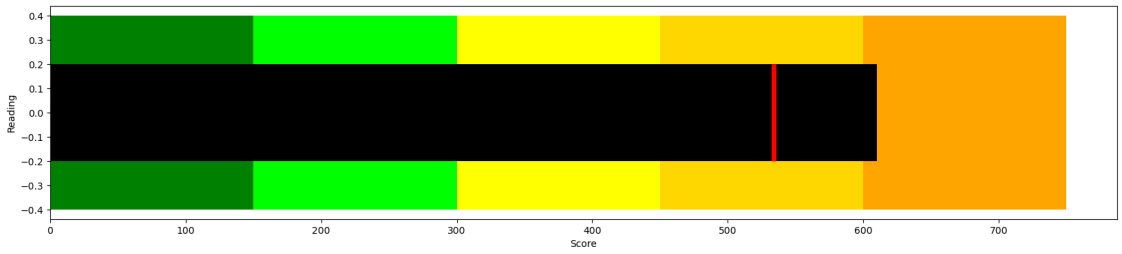


[51]:
```
import matplotlib.pyplot as plt
average = df.loc[:, 'reading'].mean()
colors = ("green", "lime", "yellow", "gold", "orange")
fig = plt.figure (figsize= (20,4))
ax = fig.add_subplot (1,1,1)
plt.barh(y=[0,0,0,0,0], width= [150,150,150,150,150], left=␣
 ↪[0,150,300,450,600], color=colors)
plt.barh(y=0, width=df['reading'], color="black", height=0.4 )

plt.vlines(x=average, ymin=-0.2, ymax=0.2, color="red", linewidth=5)

plt.xlabel("Score")
plt.ylabel("Reading")
plt.title("Bullet Chart Python")
```

[51]:
```
<function matplotlib.pyplot.title(label, fontdict=None, loc=None, pad=None, *,
y=None, **kwargs)>
```



[53]:
```
from math import pi
```

[66]:
```
# number of variables
categories=list(df)[1:]
N = len(categories)

#plotting first item
values=df.loc[0].drop('state').values.flatten().tolist()
values += values[:1]
values

# Calculating slices
angles = [n / float(N) * 2 * pi for n in range(N)]
angles += angles[:1]

# Initialise the spider plot
ax = plt.subplot(111, polar=True)

# Draw one axe per variable + add labels
```

```
plt.xticks(angles[:-1], categories, color='grey', size=8)

# Draw ylabels
ax.set_rlabel_position(0)
plt.yticks([100,200,300,400,500], ["100","200","300","400","500"],␣
 ↪color="grey", size=7)
plt.ylim(0,600)

# Plot data
ax.plot(angles, values, linewidth=1, linestyle='solid')

# Fill area
ax.fill(angles, values, 'b', alpha=0.1)

# Show the graph
plt.title("Spider Chart Python")
plt.show()
```