

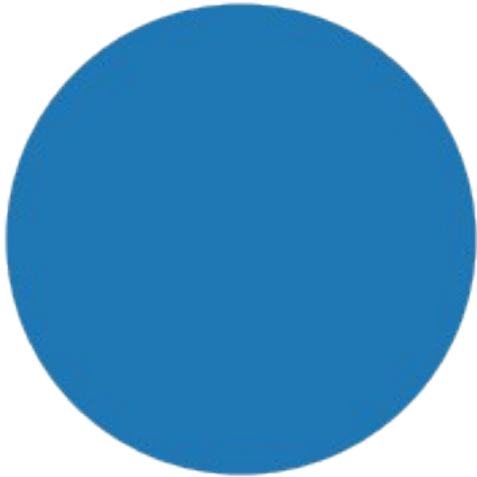
Matplotlib Tutorial Part - 8 and Part - 9

Pie Chart

```
import matplotlib.pyplot as plt

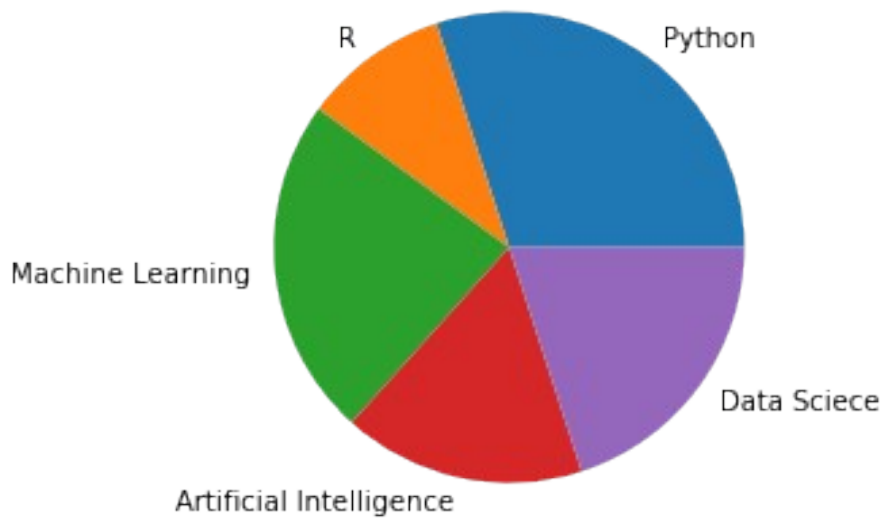
classes = ["Python", 'R', 'Machine Learning', 'Artificial  
Intelligence',  
          'Data Sciece']
class1_students = [45, 15, 35, 25, 30]

plt.pie([1])
plt.show()
```



```
classes = ["Python", 'R', 'Machine Learning', 'Artificial  
Intelligence',  
          'Data Sciece']
class1_students = [45, 15, 35, 25, 30]

plt.pie(class1_students, labels = classes)
plt.show()
```



```
"""
plt.pie(
    ['x',
     'explode=None',
     'labels=None',
     'colors=None',
     'autopct=None',
     'pctdistance=0.6',
     'shadow=False',
     'labeldistance=1.1',
     'startangle=None',
     'radius=None',
     'counterclock=True',
     'wedgeprops=None',
     'textprops=None',
     'center=(0, 0)',
     'frame=False',
     'rotatelabels=False',
     '*',
     'data=None'],
)

x : array-like
explode : array-like, optional, default: None
labels : list, optional, default: None
colors : array-like, optional, default: None
autopct : None (default), string, or function, optional
pctdistance : float, optional, default: 0.6
shadow : bool, optional, default: False
labeldistance : float, optional, default: 1.1
```

```

startangle : float, optional, default: None
radius : float, optional, default: None
counterclock : bool, optional, default: True
wedgeprops : dict, optional, default: None
    ---- example, you can pass in ``wedgeprops = {'linewidth':
3}``
textprops : dict, optional, default: None
center : list of float, optional, default: (0, 0)
frame : bool, optional, default: False
rotatelabels : bool, optional, default: False

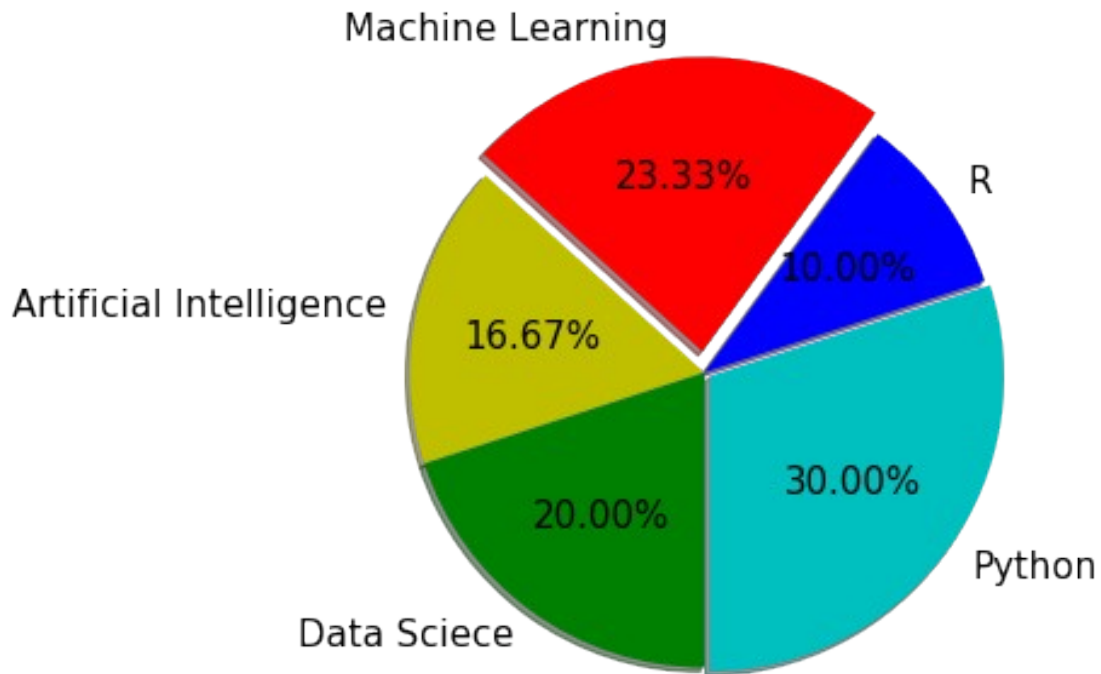
"""

"\nplt.pie(\n    ['x', \n    'explode=None', \n    'labels=None', \n
'colors=None', \n    'autopct=None', \n    'pctdistance=0.6', \n
'shadow=False', \n    'labeldistance=1.1', \n    'startangle=None', \n
'radius=None', \n    'counterclock=True', \n    'wedgeprops=None', \n
'textprops=None', \n    'center=(0, 0)', \n    'frame=False', \n
'rotatelabels=False', \n    '*', \n    'data=None'],\n)\n\nx : array-
like\nexplode : array-like, optional, default: None\nlabels : list,
optional, default: None\ncolors : array-like, optional, default: None\
nautopct : None (default), string, or function, optional\
npctdistance : float, optional, default: 0.6\nshadow : bool, optional,
default: False\nlabeldistance : float, optional, default: 1.1\
nstartangle : float, optional, default: None\nradius : float,
optional, default: None\ncounterclock : bool, optional, default: True\
nwedgeprops : dict, optional, default: None \n    ---- example,
you can pass in ``wedgeprops = {'linewidth': 3}``\nntextprops : dict,
optional, default: None\ncenter : list of float, optional, default:
(0, 0)\nframe : bool, optional, default: False\nrotatelabels : bool,
optional, default: False\n\n"

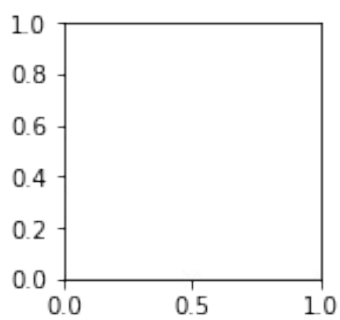
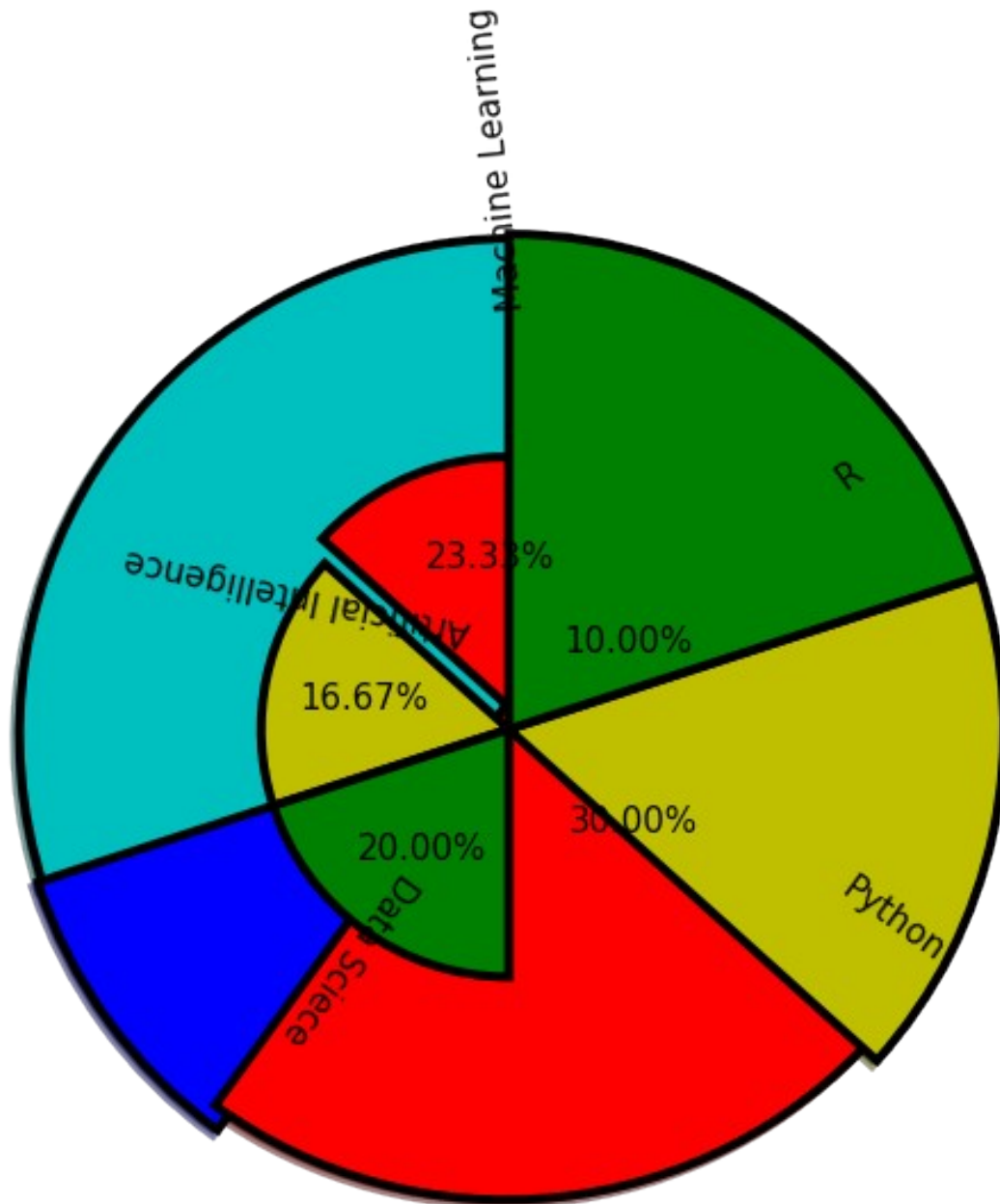
classes = ["Python", 'R', 'Machine Learning', 'Artificial
Intelligence',
           'Data Sciece']
class1_students = [45, 15, 35, 25, 30]
explode = [0.03,0,0.1,0,0]
colors = ["c", 'b','r','y','g']
textprops = {"fontsize":15}

plt.pie(class1_students,
        labels = classes,
        explode = explode,
        colors =colors,
        autopct = "%0.2f%%",
        shadow = True,
        radius = 1.4,
        startangle = 270,
        textprops =textprops)
plt.show()

```

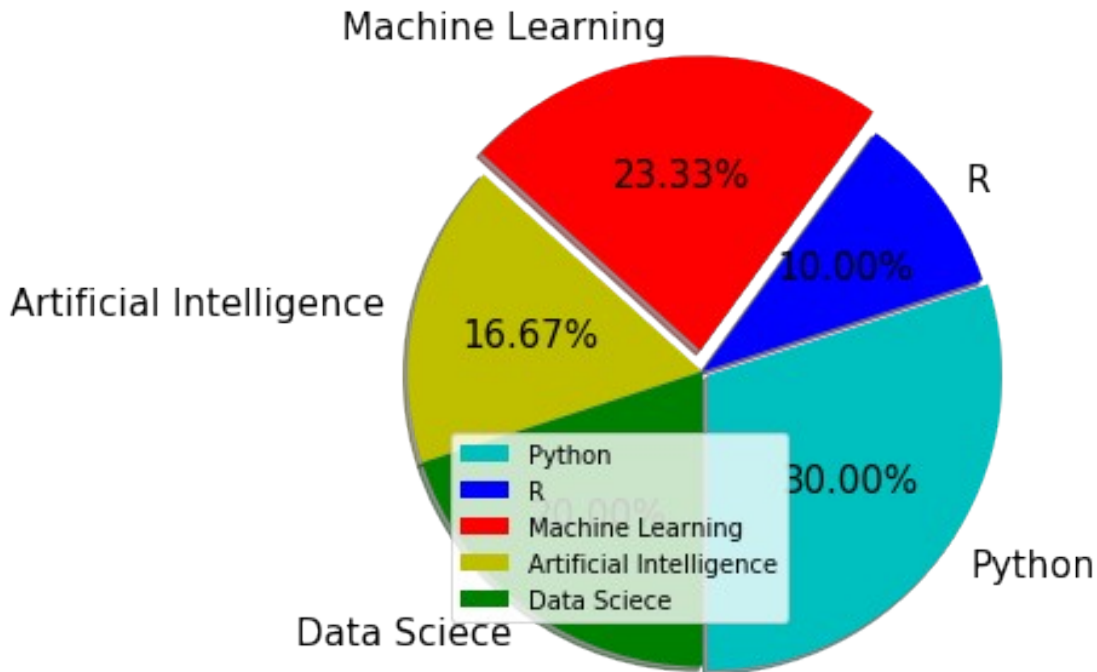


```
plt.figure(figsize = (3,2))
wedgeprops = {"linewidth": 4, 'width':3, "edgecolor":"k"}
plt.pie(
    class1_students,
    labels = classes,
    explode = explode,
    colors = colors,
    autopct = "%0.2f%%",
    pctdistance = 0.6,
    shadow = True,
    labeldistance = 1.6,
    startangle = 270,
    radius = 1,
    counterclock = True,
    wedgeprops = wedgeprops,
    textprops = textprops,
    center=(2, 3),
    frame=True,
    rotatelabels=True
)
plt.show()
```



```
explode = [0.03,0,0.1,0,0]
colors = ["c", 'b', 'r', 'y', 'g']
textprops = {"fontsize":15}
```

```
plt.pie(class1_students, labels = classes, explode = explode,
        colors = colors, autopct = "%0.2f%%", shadow = True, radius =
1.4,
        startangle = 270, textprops = textprops)
plt.legend()
plt.show()
```



```
import numpy as np
plt.figure(figsize=(7,4))
#plt.figure(figsize=(16,9))

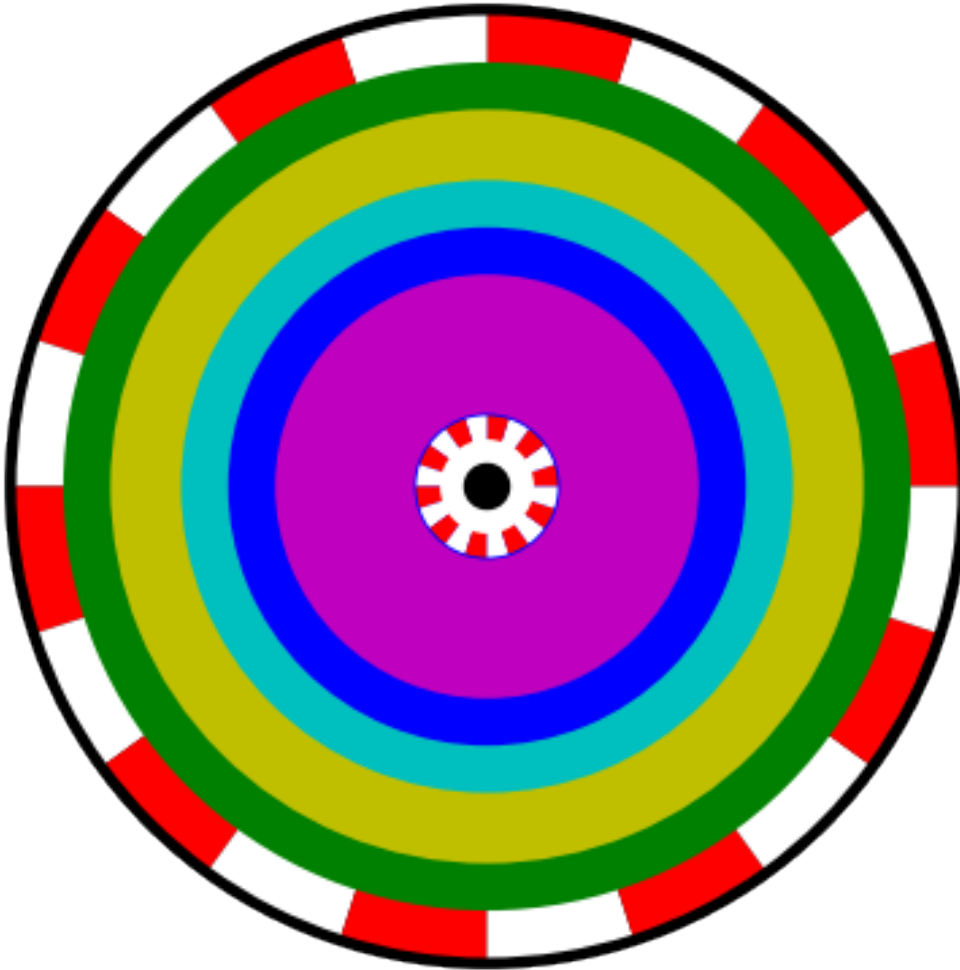
colors =
['r','w','r','w','r','w','r','w','r','w','r','w','r','w','r','w','r','w','r','w']
labels = np.ones(20)
#labels = [1.0,1.0,1.0,1.0,1.0,.....,1.0]

plt.pie([1], colors="k", radius = 2.05)
plt.pie(labels, colors=colors, radius = 2.0)

plt.pie([1], colors="g", radius = 1.8)
plt.pie([1], colors="y", radius = 1.6)
plt.pie([1], colors="c", radius = 1.3)
plt.pie([1], colors="b", radius = 1.1)
plt.pie([1], colors="m", radius = 0.9)

plt.pie([1], colors="b", radius = 0.31)
plt.pie(labels, colors=colors, radius = 0.3)
```

```
plt.pie([1], colors="w", radius = 0.2)  
plt.pie([1], colors="k", radius = 0.1)  
  
plt.show()
```



```
print("Thank You")
```

Thank You