

GRAPHIC ERA HILL UNIVERSITY

Department of Computer Application

**ML using Python Practical**

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MCA Sec-C

SEM-3

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Question 1

#bar chart

import matplotlib.pyplot as plt

left = [1, 2, 3, 4, 5]

height = [10, 24, 36, 40, 5]

tick\_label = ['one', 'two', 'three', 'four', 'five']

plt.bar(left, height, tick\_label = tick\_label,

width = 0.8, color = ['red', 'green'])

plt.xlabel('x - axis')

plt.ylabel('y - axis')

plt.title('My bar chart!')

plt.show()

#histogram

ages = [2,5,70,40,30,45,50,45,43,40,44,

60,7,13,57,18,90,77,32,21,20,40]

range = (0, 100)

bins = 10

plt.hist(ages, bins, range, color = 'green',

histtype = 'bar', rwidth = 0.8)

plt.xlabel('age')

plt.ylabel('No. of people')

plt.title('My histogram')

plt.show()

#pie chart

activities = ['eat', 'sleep', 'work', 'play']

slices = [3, 7, 8, 6]

colors = ['r', 'y', 'g', 'b']

plt.pie(slices, labels = activities, colors=colors,

startangle=90, shadow = True, explode = (0, 0, 0.1, 0),

radius = 1.2, autopct = '%1.1f%%')

plt.legend()

plt.show()

QUESTION 2

# -\*- coding: utf-8 -\*-

"""

Created on Mon Jan 31 11:30:00 2022

@author: Amit Rawat

"""

# train-test split evaluation random forest on the housing dataset

import pandas as pd

from pandas import read\_csv

from sklearn.model\_selection import train\_test\_split

from sklearn.ensemble import RandomForestRegressor

from sklearn.metrics import mean\_absolute\_error

# load dataset

dataframe = pd.read\_csv("pollution.csv")

data = dataframe.values

# split into inputs and outputs

X, y = data[:, :-1], data[:, -1]

print(X.shape, y.shape)

# split into train test sets

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.33, random\_state=1)

print(X\_train.shape, X\_test.shape, y\_train.shape, y\_test.shape)

Chart, pie chart

Description automatically generated

Chart, bar chart

Description automatically generated

Chart, bar chart

Description automatically generated