in python programming larguase.

program '~

impost numpy as no from skiedrn. linear-model impost LinearRegression Impost matphotolog, pyphut as pot

X = nr. array([1,2,3,4,5]). reshare(-1,1)  $\theta = nr. array([2,4,5,4,5])$ 

model = Linear Regrassion()
model. fit (X, y)

X-test = np.array ([6,7,8]). reshape (-1,1)

predicterrens = model. predict (X-Lest)

PIt. Scotter (X18, label = loutal)

PIt. Plot (X-test, predictions, color=lived, label = tirender)

PIt. Xlabel (1/x!!)

PIt. Ylanel (1/x!!)

PIt-legand () PIt-Shaw()

exp:-3

To struly and implement range, variance, standard derivers and interquaring range in python programming language

import statisties on &>

devel = [12, 15, 18, 121, 30, 35, 40, 45, 50, 60]

Odata-range = max(data) - mánldeure)
print (data-range)

- acuta-mean=Statisfico.mean(data)

  print (data-mean)

  data-vomiance = Statistico.vomance (data)

  print (varianco)
- B doublested of ex = statistics, stoler coloner)
  Proint (double-stoler)
- import nomny on np
  clato.scat ()

  10wor-hour = datal; len (data) 1/2]

  median-lower-hour ) = np. median clower hours

  Upner-hour = date [len cdata) 1/2: ]

  meduan-upper-hour = np. median (upper-hour)

  iar = median-upper-hour-median (upper-hour)

  iar = median-upper-hour-median (upper-hour)

  pmint cian

As n: To understand mutilineon regression (its implementation in the python programming language

man:-

import matplotlib aso. Pyplot as plt import numpy or np format sticom imners destores - Incommodel, meny from skieum, model-selection import train-test-sput between educate to ade bourne, boken buston = datares. load\_borson (retorn -x-y-sore) X=boston-devel

y = boston, terses

Cx, v', test-sne = on, random - state sty

re o = linear-model- Linear Regresson ()

reg. Fit (X- bown, y- brown)

(print ( n-y-test))

pH. syle-well five thinge ght )

PHE Jeaster ( neg - predict (X-bright), reg. pridict (X - boun), y-boun 10000 = " meren,

5= 10, label = 11 Train deta")

Plt. Seat

674p- 6

Am: - To understand Lognitic regression and its imple mentation in python programming Language.

Structe weed 1- Jupyter Notebour.

program L

from skieam. metrices imper Logistickegrennon from skieam. metrices imper Logistickegrennon from skiearn. metrices imper confision - matrix, accord-scre

data - 10 Pol Toad - CSV ( ' your actoret com')

mp. random. seed (6)

- θ χ= np. random. rando (100,2) θ= &[:,0] + x[:,1] > 0), en type cont)
- X-town, X-test, y. train, y rest = train-test-spirt

  (x, y, test-sne=0.2 , random-state=41)
- @ model = Logistic Regression()
  onwoodel. Fot (X-pain, y-proun)
- ( y med = model. preduct (x-test)
- (b) acuray = accuray-scere (y-test 14-med)
- (1) Everest = Clampication-report (y-test, y-prod)
- 3 conf-maline = confision-making (y-test, y-pred)

y-prod = nb-classifier.product (X-test)

accuracy = accuracy-score(y-tost,y-prod)

accuracy

----

OXP-7 COND

Aim: To understand Decision Tree and its implementation in Python programming language.

Anogram: O from skleam import dedosess

from stream, model-serection import brain-test-split
from Stream, bee import Decision Tree acrossing
from Stream, metrics import accordy-sore, confusion-mains

- D in = alcohorers. 1000\_ins ()

  X = ins.dala

  Y = ins. tanes
- (x 1 y , test size = 0.3 , random \_ state= ur)
- at classin = Decision Tree Classing ()
- 6 dt-clossifix . Fit (X-train, J-train)
- 6 y-pred = old-Classifing. Predict (X\_tesi)
- 1 general = cicurciay-score (y-tat, y-prod)
- (8) oonf-matrix = (onfusion-matrix (y-test, J-pred)
- 2 acmay
- @ Conf-matrix

## EXP-8

Aim: - To understand Noive sayes closs the rigorithm and
its implementation in python programming language.

Program: - From skieorollatasets import load ins

1715 = 10ad-1715()

X = 1715. davae

J = 1715. larget

From Skieamo model-selection import bain-test

SPILE

X-train, X-test, y-train, y-test = train\_test\_spl?

(x, y, lest-spl=0-4, random-) tote=1)

From skillown, neurl Boys import Goussan NB

guls = Gravisma NB ()

Gnb. fit (x-train, y-train)

y-pred= gnb. Predad (x - test)

## EXP-8)

Program: De from skieom import dollasely

from skieorn modelselection import train-test-split

from skieorn newe-boyes import GaussianNp

from Skieonn metrics import accuracy -scre

- 2) inis = datasets. 100d-inis ()

  \* = inis, data

  y = inis, target

  | 1000 mr derg
- 3 X-train, X-test 1y-train, y-test = tocum-test\_spirt (x1, y1, test-size > 0.3, Random-State #42)
- O nb-compres = Gayston NB()
- (1) nb-classifity. Fit (X-bain, y-brain)