Faculty Of Computer Applications and IT

Machine Learning Using Python
2nd Mid Term Exam 2024

Course: MSC IT   **Semester: II**
Date: 05-04-2024   **Marks: 50**

SET- 01

Section: A

1. Create a NumPy array using the range function.

2. Print the data type of each element within the array.

3. Create a pandas dataframe from the python dictionary for Car Record.

4. Add one column in the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe and print the first 15 records..

2. Add a new column named "bmi" to store Body Mass Index for each record. Formula to calculate BMI is: weight_kg / (height_cm/100)^2.

3. Split the data set into test and train.

4. Build a logistic regression model to predict the fracture considering age, sex, bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction
   using appropriate graphs.

6. Calculate accuracy of the model using a confusion matrix.

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SET-02

Section: A

1. Create a 3* 3 NumPy array values between 0 to 9.?

2. Print the data type of element of the array?

3. Create a pandas dataframe from the python dictionary for Mobile phone Details.

4. Add one more column in the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe and display the last five records.

2. Add new column named "bmi" to store Body Mass Index for each record.Formula to calculate BMI is: weight_kg / (height_cm/100)^2

3. Split the data set into tests and train in 30:70 ratio.

4. Build a SVM model to predict the fracture considering age, sex,bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction using appropriate graphs.

6. Calculate accuracy of the model using a confusion matrix.

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SET-03

Section: A

1. Create a NumPy array having all the elements as multiple of 5?

2. Print the standard deviation value of the above NumPy array?

3. Create a pandas dataframe from the python dictionary for Book details..

4. Rename one column from the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe.

2. Add a new column named "bmi" to store Body Mass Index for each record. Formula to calculate BMI is: weight_kg / (height_cm/100)^2

3. Split the data set into tests and train in a 20:80 ratio.

4. Build a SVM model to predict the fracture considering age, sex,bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction using appropriate graphs.

6. Calculate accuracy of the model using a confusion matix.

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SET- 04

Section: A

1. Create a NumPy array from a list?

2. Print the maximum and minimum value in above NumPy array?

3. Create a pandas dataframe from the python dictionary for Students Record.

4. Delete one column from the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe and print first 15 record..

2. Add new column named "bmi" to store Body Mass Index for each record. Formula to calculate BMI is: weight_kg / (height_cm/100)^2.

3. Split the data set in to test and train.

4. Build a logistic regression model to predict the fracture considering age, sex, bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction using appropriate graph.

6. Calculate accuracy of the model using confusion matix.

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SET-05

Section: A

1. Create a 5* 5 NumPy array values between 0 to 25?

2. Print the size and shape of the array?

3. Create a pandas dataframe from the python dictionary for Mobile phone Details.

4. Add one more column in the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe.

2. Add new column named "bmi" to store Body Mass Index for each record.Formula to calculate BMI is: weight_kg / (height_cm/100)^2

3. Split the data set into tests and train in 30:70 ratio.

4. Build a KNN model to predict the fracture considering age, sex,bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction using appropriate graphs.

6. Calculate accuracy of the model using a confusion matrix.

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SET-06

Section: A

1. Create a NumPy array using random function?

2. Print the average value in above NumPy array?

3. Create a pandas dataframe from the python dictionary for Book details.

4. Rename one column from the above dataframe.

Section: B

1. Load the fracture.csv data into pandas dataframe.

2. Add new column named "bmi" to store Body Mass Index for each record. Formula to calculate BMI is: weight_kg / (height_cm/100)^2

3. Split the data set in to test and train in 20:80 ratio.

4. Build a SVM model to predict the fracture considering age, sex,bmi and bmd.

5. Apply the model on to the test and train data. Plot the outcomes of prediction using appropriate graph.

6. Calculate accuracy of the model using confusion matix.