COURSE - 4 Basic Predictive Analytics

- Machine Learning Type: Supervised Machine Learning
- Problem Type: Classification: Binary Class
- Model Implementation: Decision Tree Classifier

Determine whether the given data is male or female based on height and weight. Based on height and weight, predict the gender.

To implement the model, follow these instructions:

- Participants/students should prepare the data and read the problem statement carefully to choose the correct features and labels
- Data should be provided (or prepared) in the form of a dictionary. Using the dictionary, extract the features and labels separately.
- No character data should be included.
- Training and test data will not be split.
- Implementation should be done without any functions.
- Obtain test data from the users and print the predicted values from the model.

- Machine Learning Type: Supervised Machine Learning
- Problem Type: Classification: Binary Class
- Model Implementation: Random Forest Classifier

Predict whether the customer will buy the given product based on previous transactions and promotions. If the customer is going to purchase the product, the model should predict "YES"; otherwise, "NO" ["YES" = 1, "NO" = 0}

To implement the model, follow these instructions:

- Participants/students should prepare the data and read the problem statement carefully to choose the correct features and labels
- Data should be provisioned in a CSV file and should have features and labels.
- No character data should be included.
- Using a CSV file, the features and labels will be extracted into a list

- Training and test data will not be split.
- Implementation should be done without any functions.
- Obtain test data from the users and print the predicted values from the model.

Problem 3:

- Machine Learning Type: Supervised Machine Learning
- Problem Type: Classification: Binary Class
- Model Implementation: Decision Tree

Predict whether the given player will score more than 50 runs in the upcoming cricket match based on the last three years' cricket matches. If the given players score more than 50 runs, the model should predict "YES." Otherwise, it should predict "NO." { YES =1, NO = 0}

To implement the model, follow these instructions:

- Participants/students should prepare the data and read the problem statement carefully to choose the correct features and labels
- Separate CSV files should be created to train and test the model.
- Numerical values should be present in all data fields, and no character data should be included.
- Ideally, training and data should be split by 70/30.
- Establish the appropriate function for the implementation of models and data engineering.
- Write the model results in a CSV file.

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Problem 4:

- Machine Learning Type: Supervised Machine Learning
- Problem Type: Classification: Multi-Class
- Model Implementation: Logistics Regression

Predicting a patient's ethnicity based on his height, weight, and color. The ethnicity should be Indian, American, African, or Chinese.

To implement the model, follow these instructions:

- Participants/students should prepare the data and read the problem statement carefully to choose the correct features and labels.
- A single CSV file should contain both the training and test data
- Numerical values should be present in all data fields, and no character data should be included.
- Ideally, training and data should be split by 70/30.
- Establish the appropriate function for the implementation of models and data engineering.
- Write the model results in a CSV file.