



MACHINE LEARNING 4

Assignment 1

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1.Introduction

This assignment will help you to consolidate the concepts learnt in the session.

2.Problem Statement

Predicting Survival in the Titanic Data Set

We will be using a decision tree to make predictions about the Titanic data set from Kaggle. This data set provides information on the Titanic passengers and can be used to predict whether a passenger survived or not.

Loading Data and modules

```
import numpy as np

import pandas as pd

import seaborn as sb

import matplotlib.pyplot as plt

import sklearn

from pandas import Series, DataFrame

from pylab import rcParams

from sklearn import preprocessing

from sklearn.linear_model import LogisticRegression

from sklearn.cross_validation import train_test_split

from sklearn import metrics
```

```
from sklearn.metrics import classification_report
```

Url=

<https://raw.githubusercontent.com/BigDataGal/Python-for-Data-Science/master/titanic-train.csv>

```
titanic = pd.read_csv(url)
```

```
titanic.columns =
```

```
['PassengerId','Survived','Pclass','Name','Sex','Age','SibSp','Parch','Ticket','Fare','Cabin','Embarked']
```

You use only Pclass, Sex, Age, SibSp (Siblings aboard), Parch (Parents/children aboard), and Fare to predict whether a passenger survived.

NOTE: The solutions shared through Github should contain the source code used and the screenshot of the output.

3. Output

This assignment consists of 200 marks and has to be submitted in .ipynb/PDF format in the upcoming session for evaluation.