

# Python Programming

## Machine Learning Assignment : 17

There is one data set of advertisement agency.

Consider below Dataset as

	TV	radio	newspaper	sales
<b>1</b>	230.1	37.8	69.2	22.1
<b>2</b>	44.5	39.3	45.1	10.4
<b>3</b>	17.2	45.9	69.3	9.3
<b>4</b>	151.5	41.3	58.5	18.5
<b>5</b>	180.8	10.8	58.4	12.9
<b>6</b>	8.7	48.9	75	7.2
<b>7</b>	57.5	32.8	23.5	11.8
<b>8</b>	120.2	19.6	11.6	13.2
<b>9</b>	8.6	2.1	1	4.8
<b>10</b>	199.8	2.6	21.2	10.6

Dataset contains multiple records about the customers who invest in multiple advertisement options.

Depends on that sales feature indicates the the increased amount in there sales

This data set contains 4 features as

TV

Radio

Television

Depends on the above three features Sales feature indicates the increased sale amount.

**We have to design Machine Learning application which uses Classification technique.**

**Design machine learning application which follows below steps as**

**Step 1:**

**Get Data**

Load data from MarvellousAdvertising.csv file into python application.

**Step 2:**

**Clean, Prepare and Manipulate data**

As we want to use the above data into machine learning application we have prepare that in the format which is accepted by the algorithms.

**Step 3:**

**Train Data**

Now we want to train our data for that we have to select the Machine learning algorithm. For that we select Linear Regression algorithm from sykit learn library.

For training purpose divide the dataset into half part.

Use train method to train our dataset.

**Step 4:**

**Test the data**

Test data by passing the remaining half part of the data set.

**Step 5:**

Display predicted values of Linear regression algorithms as well as expected values which are provided by the data set.