



"Report of Five Days Workshop on Machine Learning Using Python"

Date : 10th to 14th January 2022

Department of Statistics Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati had signed MoU with **AIS Solutions Pvt. Ltd., Pune**. Collaboration with AIS Solutions Pvt. Ltd., Pune, Our Department of Statistics and RUSA jointly organized Online **Five Days Workshop on Machine Learning Using Python** during 10th January, to 14th January, 2022.

The workshop was conducted for M.Sc. (Part- II) Statistics students. Inaugural function of online workshop started at 10.00 am. Welcome speech was delivered by Miss. Nilambari A. Jagtap, Organizing Secretary of the program. Function was chaired by Dr. Avinash S. Jagtap, Vice Principal of college and Head of Department of Statistics, Ms. Pooja S. Zanjurne proposed vote of thanks.

Daily two sessions was scheduled, first session from 10.00 AM to 01.00 PM and second session from 02.00 PM 05.00 PM. Whole workshops conducted by resource person **Mr. Prajyot Patil (Founder and CEO of AIS Solutions Pvt. Ltd., Pune)** on "Machine Learning Using Python". In each session online hands on training was delivered on Machine Learning Using Python and students had done the same.

Total 47 students were beneficiaries of this workshop, and this workshop was ended by conducting online practical test of marks 100. Overall performance of the students in workshop and their test was excellent. Students have scored well in online practical test conducted by Mr. Prajyot Patil.

These five days workshop helped students to understand various tools and concepts in machine learning also they can now analyze the data by using python software. This workshop provided good analytical skills in data handling and interpreting the results or outcomes given by python for students. Students learned to understand Big Data Analysis as it is useful in government as well as private sector. They gained information about which tools to be applied for the analysis overall it was a motivating workshop as students actively participated and enjoyed the same.

Dr. Avinash S. Jagtap
Head, Dept. of Statistics

Dr. Ajit B. Telave
RUSA Coordinator

Principal

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pyguyter kin classification new Copy 1 Load (Revised 06/10/2020) (parent class)

```

import numpy as np
import pandas as pd
import sklearn.preprocessing as preprocessing
import sklearn.metrics as metrics

# Load data
data = pd.read_csv('data.csv')

# Feature scaling
scaler = preprocessing.MinMaxScaler()
data_scaled = scaler.fit_transform(data)

# Model Prediction
y_pred = kin_classifier.predict(data_scaled)

# Accuracy
accuracy = metrics.accuracy_score(y_test, y_pred)
print('Accuracy: %f' % accuracy)

```

Pragati Patel

First Day Link (Workshop ...)

First Day Link (Workshop ...)

First Day Link (Workshop ...)

Fourth Day Link (Workshop ...)

3:47 PM 25-Apr-22

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Standard Deviation

Standard Deviation is a measure of how spread out numbers are. It is usually denoted by the Greek letter sigma (σ).

Standard Deviation for new addition

Case	Value
1	10
2	15
3	20
4	25
5	30
6	35
7	40
8	45
9	50
10	55
11	60
12	65
13	70
14	75
15	80
16	85
17	90
18	95
19	100

Count = $n = 18$

Average = $\bar{x} = \frac{\sum x_i}{n} = \frac{1530}{18} = 85$

Standard Deviation = $\sigma = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n}} = \sqrt{\frac{1530}{18}} = 9.12$

Coefficient of Variation = $CV = \frac{\sigma}{\bar{x}} \times 100\% = 10.73\%$

- Standard Deviation (σ) is for new building (branding).
- Coefficient of Variation (CV) is used to decide when to stop branding. We can use CV to see what.
- Average (\bar{x}) is the value in the last node.

Standard Deviation for new addition (parent)

$$ST(X, Y) = \sum P_i(x_i)S_i(x)$$

Pragati Patel

First Day Link (Workshop ...)

First Day Link (Workshop ...)

First Day Link (Workshop ...)

Fourth Day Link (Workshop ...)

52:20 / 1:59:21

3:48 PM 25-Apr-22

The screenshot shows a Jupyter Notebook interface with a browser window in the background. The notebook content includes:

Let's stick with the ggplot style and actually show you how to utilize pandas built-in plotting capabilities!

Plot Types

There are several plot types built-in to pandas, most of them statistical plots by nature:

- of plot.area
- of plot.barh
- of plot.density
- of plot.hist
- of plot.kde
- of plot.line
- of plot.scatter
- of plot.bar
- of plot.box
- of plot.headm
- of plot.kde
- of plot.pie

You can also just call of.plot(kind='hist') or replace that kind argument with any of the key terms shown in the list above (e.g. 'box', 'barh', etc.)

Let's start going through them!

Area

```
In [17]: df2
```

```
Out[17]:
```

The browser window shows a meeting link: meet.google.com/xmk-apzu-qwo. The system tray at the bottom indicates the time is 01:54 PM on 14-01-2022.



Prajyot Patil

Fifth Day Link (Workshop on Machine Learning Using Python) (2022-01-13 at 22:45 GMT-8)

The screenshot shows a Google Meet interface during a presentation. The main window displays a grid of participants:

- Saihari Bhosale
- Jayshri Kambale
- RUTUJA TAWARE
- Gouri Bhoite
- Sonaj Pawar
- Kalyani Kharade
- 38 others
- You

An "In-call messages" panel is open on the right, showing a conversation:

- Rutuja Patilale 12:36: No
- harshada mohite 13:21: No
- Jaydeep Molnar 13:36: health insurance
- harshada mohite 13:38: Yes
- Soundarya Chougale 13:55: Notice onid ka sir
- harshada mohite 13:55: No sir

The bottom of the screen shows a video player interface with a play button, a progress bar at 1:42:41 / 1:59:21, and control icons for volume, settings, and full screen.



Jayshri Kambale

Machine Learning



What if you could predict customer satisfaction or analyze what factors will affect household pricing or to predict stocks over the next few days, based on previous years data?

There are many wonderful libraries implementing machine learning algorithms such as Scikit-Learn, Random Forest, Support Vector Machines, NLTK and TensorFlow.

meet.google.com is sharing your screen. [Stop sharing](#) [Info](#)



Prajyot Patil