



SUDHARSAN ENGINEERING COLLEGE

Sathiyamangalam, Pudukkottai.



DEPARTMENT: COMPUTER SCIENCE AND ENGINEERING & ARTIFICIAL INTELLIGENCE
AND DATA SCIENCE

TITLE OF THE ACTIVITY: One Day Workshop on Applications of Data Science –
Hands on Training using Python on CSE and AI&DS

DATE :18.02.2023

BROCHURE / INVITATION:

The brochure features a background of various educational icons like books, pencils, and gears. At the top left, it displays the logos for Sudharsan Engineering College and E-Box Colleges, along with the tagline 'We Revolutionize Engineering & Technology Learning'. To the right is the logo for the Institution's Innovation Council. A green-bordered box in the top right corner contains the counselling code '3920'. The main title 'Applications of Data Science - Hands-on Training using Python' is prominently displayed in a large, bold, blue font, with '(ONE DAY WORKSHOP)' underneath. Below the title, a blue arrow-shaped graphic points to the 'Chief Guest' section, which includes a circular portrait of Dr. D. Asir Antony Gnana Singh, an Associate Professor of CSE at Anna University, Trichy. The organizing departments are listed as the Department of Computer Science and Engineering and the Department of Artificial Intelligence and Data Science. At the bottom, a table provides the event details: Saturday, February 18, starting at 10:00 AM, at the Sona Block of Sudharsan Engineering College. The website 'www.sec.ac.in' is also provided.

SUDHARSAN ENGINEERING COLLEGE
E-Box Colleges
We Revolutionize Engineering & Technology Learning
INSTITUTION'S INNOVATION COUNCIL
3920
Counselling Code

Applications of Data Science - Hands-on Training using Python

(ONE DAY WORKSHOP)

Chief Guest

Dr. D. Asir Antony Gnana Singh
Associate Professor, CSE
Anna University, Trichy

Organized by
Department of Computer Science and Engineering
Department of Artificial Intelligence and Data Science

Saturday February 18	Starts 10:00 AM	Venue : Sona Block, Sudharsan Engineering College	www.sec.ac.in
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FACULTY INCHARGE

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SUDHARSAN ENGINEERING COLLEGE

Sathiyamangalam, Pudukkottai.



LIST OF PARTICIPANTS

**TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science –
Hands on Training using Python on CSE and AI&DS**

SI No	Register No. of the student	Name of the Student	Year of Study / Department
1	814420104001	S.Ajay	III/CSE
2	814420104002	A.Arthi	III/CSE
3	814420104004	J.Delphin Sophiya	III/CSE
4	814420104005	M.Hari Prasath	III/CSE
5	814420104006	I.Ignesious	III/CSE
6	814420104007	A. Karthikeyan	III/CSE
7	814420104008	T.Lakshmi Priya	III/CSE
8	814420104009	S.Lavanya	III/CSE
9	814420104010	M. Logeshwari	III/CSE
10	814420104012	M.Mathan	III/CSE
11	814420104014	C.Pavithra	III/CSE
12	814420104015	R.Poomanikamalesh	III/CSE
13	814420104018	J.Vinothanan	III/CSE
14	814420104301	J.Jainul Ahamed	III/CSE
15	814420104302	B.Mohamed Arsath	III/CSE
16	814420104303	M. Yuvaraj	III/CSE
17	814420104701	C.Gokul	III/CSE
18	814421104001	M.Arthi	II/CSE
19	814421104002	M.S.Badrinath	II/CSE
20	814421104003	G.Bala Subramaniyam	II/CSE
21	814421104005	J.Chenduran	II/CSE
22	814421104010	S.Harini	II/CSE
23	814421104011	R.Harish	II/CSE
24	814421104012	S.Janathi	II/CSE
25	814421104013	S.Kamatchi	II/CSE

26	814421104014	V.Kesavan	II/CSE
27	814421104015	M.Kishore	II/CSE
28	814421104016	K.Kokila	II/CSE
29	814421104017	K.Kuberan	II/CSE
30	814421104018	S.Logeshwaran	II/CSE
31	814421104020	R.Marimuthu	II/CSE
32	814421104021	N.Meiyaashini	II/CSE
33	814421104022	B.Mohamed Hanifa	II/CSE
34	814421104024	T.Mohan	II/CSE
35	814421104025	J.Pandilakshmi	II/CSE
36	814421104026	M.Ponnisha	II/CSE
37	814421104027	M.Sakthi Ganesha	II/CSE
38	814421104028	R.Saravanan	II/CSE
39	814421104029	M.Shanmugapriya	II/CSE
40	814421104031	C.Sivapriya	II/CSE
41	814421104033	M.Srikanth	II/CSE
42	814421104034	S.Subash	II/CSE
43	814421104035	S.Subash	II/CSE
44	814421104037	A.Thenmozhi	II/CSE
45	814421104039	R.Vaitheeswari	II/CSE
46	814421104041	P.Yogavi	II/CSE
47	814421104042	P.Yuva Karthikeyan	II/CSE
48	814421104301	M.S.Harish	II/CSE
49	814421104302	B.Surya	II/CSE
50	814420243005	S.Sangeetha	III/AI&DS
51	814420243006	A.Srikeerthi	III/AI&DS
52	814420243007	S.Subasri	III/AI&DS
53	814420243302	S.Ganesan	III/AI&DS
54	814420243303	A.Hariharan	III/AI&DS
55	814420243304	S.Rathika	III/AI&DS
56	814421243001	S.Aafrin Farzana	II/AI&DS
57	814421243002	R.Ashwin Kumar	II/AI&DS
58	814421243005	K.Bhuvana	II/AI&DS
59	814421243006	A.Dhanushsri	II/AI&DS
60	814421243007	V.Dinesh Kumar	II/AI&DS
61	814421243013	M.Manikandan	II/AI&DS
62	814421243014	P.Manikandan	II/AI&DS

63	814421243016	S.Manikandan(14.06)	II/AI&DS
64	814421243017	S.Nandhakumar	II/AI&DS
65	814421243018	M.Periyasamy	II/AI&DS
66	814421243019	S.Priyadharshini	II/AI&DS
67	814421243021	J.Ragunath	II/AI&DS
68	814421243022	A.Ramakrishnan	II/AI&DS
69	814421243024	M.Rohini	II/AI&DS
70	814421243026	R.Sangavi	II/AI&DS
71	814421243028	A.Sarath Sarathy	II/AI&DS
72	814421243030	M.Suseendran	II/AI&DS
73	814421243031	Z.Syed Kalam	II/AI&DS
74	814421243032	B.Vasanth Periyasamy	II/AI&DS
75	814421243033	M.Vigneshwaran	II/AI&DS
76	814421243034	S.Yohithi	II/AI&DS
77	814421243401	K.Jeyakumar	II/AI&DS
78	814421243301	P.Parathvaj	II/AI&DS
79	814421243302	K.Pradeepkumar	II/AI&DS
80	814421243303	K.Varshini	II/AI&DS

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**TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science –
Hands on Training using Python on CSE and AI&DS**

SAMPLE FEEDBACK



SUDHARSAN ENGINEERING COLLEGE
(Affiliated to Anna University and Approved by AICTE)
SATHIYAMANGALAM, PUDUKKOTTAI - 622501.



E-Box Colleges

DEPARTMENT OF Artificial Intelligence and Data Science.

Workshop/Seminar/Course Feedback

Title of the Workshop/Seminar/Course: Applications of Data Science


Venue: Sona Lab Date: 18/02/2023

Name(Optional): R. Sarangi. Year & Branch: II-year & AI&DS


1. How did you know about this event?
a. Website/Email b. Flyer c. Friend d. OC Staff Faculty f. Other

2. Please check the box that matches your response to each

S.NO	Parameters	Strongly Disagree	Disagree	Agree	Strongly Agree
1.	The presenter was prepared and stimulating				<input checked="" type="checkbox"/>
2.	The length of the Workshop/Seminar was satisfactory			<input checked="" type="checkbox"/>	
3.	The workshop is informative				<input checked="" type="checkbox"/>
4.	The information i received will be helpful				<input checked="" type="checkbox"/>
5.	I will recommend this workshop to others			<input checked="" type="checkbox"/>	
6.	I plan to use more of the career source resources				<input checked="" type="checkbox"/>
7.	The content was organized and easy to follow				<input checked="" type="checkbox"/>



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DEPARTMENT OF CSE

Workshop/Seminar/Course Feedback

Title of the Workshop/Seminar/Course: APPLICATION OF DATA SCIENCE USE

Venue: SONA BLOCK Date: 18/2/2023

Name(Optional): hpkul & others Year & Branch: 3rd /CSE

1. How did you know about this event?
a. Website/Email b. Flyer c. Friend d. OC Staff Faculty f. Other

2. Please check the box that matches your response to each

S.NO	Parameters	Strongly Disagree	Disagree	Agree	Strongly Agree
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5.	I will recommend this workshop to others				<input checked="" type="checkbox"/>
6.	I plan to use more of the career source resources				<input checked="" type="checkbox"/>
7.	The content was organized and easy to follow				<input checked="" type="checkbox"/>

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


TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science – Hands on Training using Python on CSE and AI&DS

SAMPLE FEEDBACK



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DEPARTMENT OF Computer Science Engineering

Workshop/Seminar/Course Feedback

Title of the Workshop/Seminar/Course: Application of data science


Venue: Sona block (SEC) Date: 18/2/2023

Name(Optional): K.kokila Year & Branch: II & CSE


1.How did you know about this event?
a. Website/Email b. Flyer c. Friend d. OC Staff Faculty f. Other

2. Please check the box that matches your response to each

S.NO	Parameters	Strongly Disagree	Disagree	Agree	Strongly Agree
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5.	I will recommend this workshop to others			<input checked="" type="checkbox"/>	
6.	I plan to use more of the career source resources				<input checked="" type="checkbox"/>
7.	The content was organized and easy to follow				<input checked="" type="checkbox"/>



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DEPARTMENT OF AI & DS

Workshop/Seminar/Course Feedback

Title of the Workshop/Seminar/Course: Applications of data science

Venue: Sona block (SEC) Date: 18-02-2023

Name(Optional): S. Sangeetha Year & Branch: III & AI&DS

1.How did you know about this event?
a. Website/Email b. Flyer c. Friend d. OC Staff Faculty f. Other

2. Please check the box that matches your response to each

S.NO	Parameters	Strongly Disagree	Disagree	Agree	Strongly Agree
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7.	The content was organized and easy to follow				<input checked="" type="checkbox"/>

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TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science – Hands on Training using Python on CSE and AI&DS

HANDOUTS

Handout

for

“Hands-on Training on Applications of Data Science using Python”

Organized by

Sudharsan Engineering College
Sathiyamangalam, Pudukkottai-622501

Prepared and Presented
By

*Dr. D. Asir Antony Gnana Singh, B.E., M.E., M.B.A., Ph.D.,
Department of CSE, BIT Campus,
Anna University, Tiruchirappalli-620 024*

on

18th February 2023

colab

statsmodels learn pandas

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Applications of Data Science using Python 18th February 2023

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Part – III	Prediction using Decision Tree Model	3
Part – IV	Prediction using Logistic Regression Model	3

Part – I

Prediction using Linear Regression Model

```
# Import all necessary libraries
import pandas as pd
from sklearn import linear_model

# Prepare dataset
dataset = {'x': [13,9,7,5,1], 'y': [14,18,12,10,6]}
df = pd.DataFrame(dataset)
x = df[['x']]
y = df[['y']]

# Build the Linear regression model
regr = linear_model.LinearRegression()
regr.fit(x,y)

# Print intercept and coef
print('Intercept: \n', regr.intercept_)
print('Coefficient: \n', regr.coef_)

# Perform prediction for 11 cards
regr.predict([[11]])
```

Part – II

Prediction using Naive Bayes Model

```
# Connect the google drive
from google.colab import drive
drive.mount('/content/drive')

# Import the dataset
import pandas as pd
dataset = pd.read_csv('/content/drive/MyDrive/SEC/All_electronics_training_dataset.csv')

# Print the dataset
print(dataset)

# Define independent and dependent variables
Xtrain = dataset[['age', 'income', 'student', 'credit_rating']]

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```

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Hands on Training using Python on CSE and AI&DS**

HANDOUTS

Applications of Data Science using Python 18th February 2023

```
Ytrain=dataset['Class']  
  
# Print independent variable  
print(Xtrain)  
  
# Print dependent variable  
print(Ytrain)  
  
# Perform ordinal encoding and print  
from sklearn.preprocessing import OrdinalEncoder  
enc = OrdinalEncoder()  
enc.fit(Xtrain)  
Xtrain_encoded=enc.transform(Xtrain)  
print(Xtrain_encoded)  
  
# Build the model and fitting the dataset  
from sklearn.naive_bayes import CategoricalNB  
clf = CategoricalNB()  
clf.fit(Xtrain_encoded,Ytrain)  
  
# Perform prediction on the test dataset [2. 0. 0. 1.]  
print(clf.predict(Xtrain_encoded[0:1]))
```

Part – III

Prediction using Decision Tree Model

```
from sklearn import tree  
clf = tree.DecisionTreeClassifier()  
clf.fit(Xtrain_encoded,Ytrain)  
  
# Perform prediction on the test dataset [2. 0. 0. 0.]  
print(clf.predict(Xtrain_encoded[1:2]))
```

Part – IV

Prediction using Logistic Regression Model

```
# Connect the google drive  
from google.colab import drive  
drive.mount('/content/drive')  
  
# Building the Logistic Regression model  
  
# Import libraries  
import statsmodels.api as sm  
import pandas as pd  
  
# Import the training dataset  
df = pd.read_csv('/content/drive/MyDrive/SEC/pima_indian_diabete  
tes.csv')
```

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Applications of Data Science using Python 18th February 2023

```
# Define the dependent and independent variables  
x_data_train = df[['Number_of_times_pregnant', 'Plasma_glucose_  
concentration', 'blood_pressure', 'skin_fold_thickness', 'insulin'  
, 'Body_mass_index', 'pedigree_function', 'Age']]  
y_data_train = df[['Class']]  
  
# Build the model and fitting the dataset  
log_reg_model = sm.Logit(y_data_train, x_data_train).fit()  
  
# Print the summary table  
print(log_reg_model.summary())
```

Prediction on New Data

```
# Load the testing dataset  
df = pd.read_csv('/content/drive/MyDrive/SEC/pima_indian_diabete  
tes_test1.csv')  
  
# Define the dependent and independent variables  
x_data_test = df[['Number_of_times_pregnant', 'Plasma_glucose_c  
oncentration', 'blood_pressure', 'skin_fold_thickness', 'insulin'  
, 'Body_mass_index', 'pedigree_function', 'Age']]  
y_data_test = df[['Class']]  
  
# Perform predictions on the test dataset  
yhat = log_reg_model.predict(x_data_test)  
prediction = list(map(round, yhat))  
  
# Compar Actual and predicted values of y  
print('Actual values', list(y_data_test.values))  
print('Predictions :', prediction)
```

Calculate the accuracy of the model

```
# Import libraries  
from sklearn.metrics import (confusion_matrix,  
accuracy_score)  
  
# Calculate a confusion matrix  
cm = confusion_matrix(y_data_test, prediction)  
print ("Confusion Matrix : \n", cm)  
  
# Print accuracy score of the model  
print('Test accuracy = ', accuracy_score(y_data_test, predicti  
on))
```

*Gaining knowledge, is the first step to wisdom.
Sharing it, is the first step to humanity.*

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Hands on Training using Python on CSE and AI&DS**

APPRECIATION LETTER



SUDHARSAN ENGINEERING COLLEGE

Sathiyamangalam - 622501, Pudukkottai Dist. Phone : 04339-240830, 240840. Email principal@sudharsan.net.in

18-02-2023

From
The Principal,
Sudharsan Engineering College,
Sathiyamangalam,
Pudukkottai.

To
Dr. D. Asir Antony Gnana Singh,
Teaching Fellow,
Department of Computer Science and Engineering,
University College of Engineering,
Anna University, BIT Campus, Tiruchirappalli-24.

Dear Sir,

Subject: Appreciation for serving as Resource Person – Hands-on Training
Programme – Reg.

We appreciate you for having served as resource person to provide hands-on training
in “One day Hands-on Training Programme on Applications of Data Science using
Python” on 18.02.2023 organised by Department of Computer Science and Engineering,
Sudharsan Engineering College.

Principal

Principal
Sudharsan Engineering College
Sathiyamangalam, Pudukkottai
Dist. Pudukkottai - 622501

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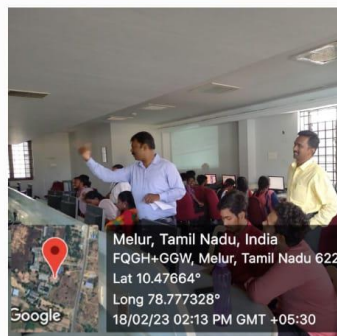
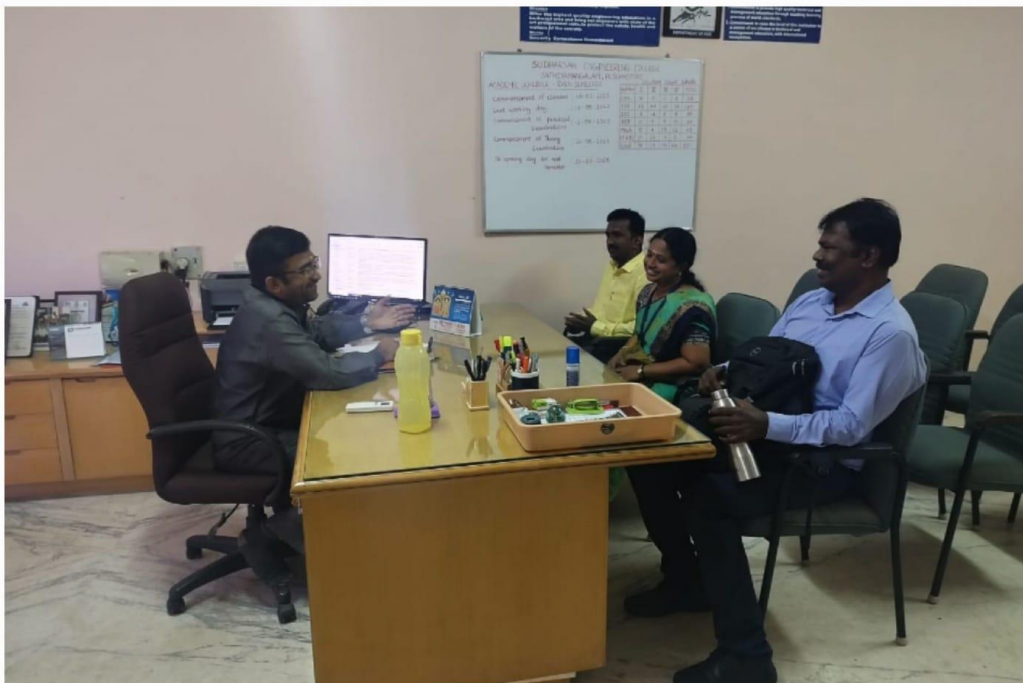
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SAMPLE PHOTOGRAPHS



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SAMPLE PHOTOGRAPHS



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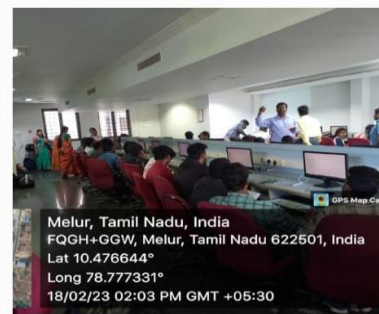
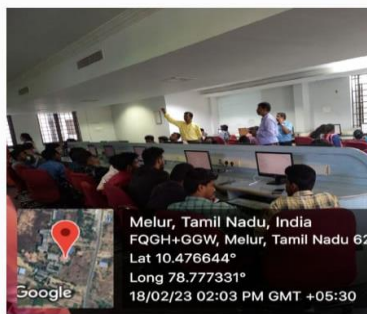
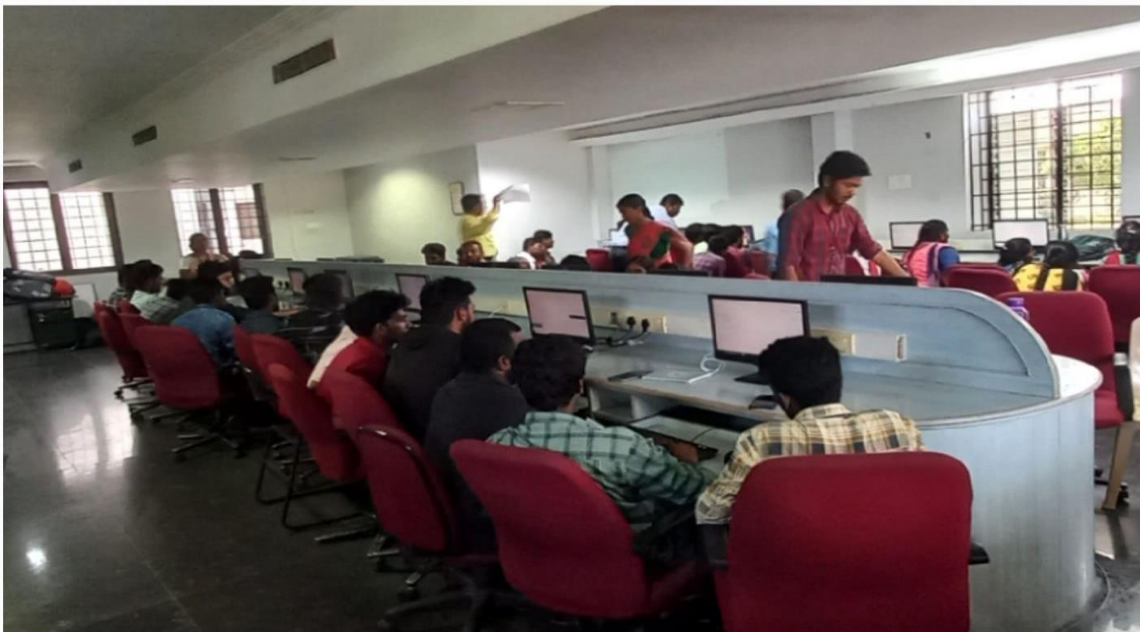
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**TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science –
Hands on Training using Python on CSE and AI&DS**

Report

The Department of Computer Science and Engineering And Artificial Intelligence and Data Science hosted a one-day workshop on "Applications of Data Science using Python" on February 18th, 2023. The objective of this workshop is to learn many things about the basics of data science and machine learning and we learn a concept with real time example comparison with human intelligence and artificial intelligence. Machine Learning Phase and Performance evaluation phase. The session was really very interesting and informative .we learned about various predictive analysis methods like using linear regression model, Naive Bayes model, decision tree model with real time case studies. In addition of theory knowledge we gained practical knowledge by doing hand's on section with application linear regression, decision tree, Naive Bayes using Python. The programme was attended by all CSE and AI&DS students, who were extremely enthusiastic.

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ACTION TAKEN REPORT

**TITLE OF THE ACTIVITY : One Day Workshop on Applications of Data Science –
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SL NO.	NAME OF THE STUDENT	SUGGESTIONS / FEEDBACK RECEIVED	ACTION(S) TAKEN / REMARKS
1.	SARATH SARATHY A	Very good	Nil
2.	VIGNESHWARAN M	Excellent Resource Person	Nil
3.	SRI KEERTHI A	Excellent Resource Person	Nil
4.	DELPHIN SOPHIYA J	Informative Session	Nil
5.	YUVAN KARTHIKEYAN P	Interesting Hands-on Session	Nil

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