

**Aditya Silver Oak Institute of Technology
Computer Engineering Department**

Title of the event: STTP on Machine Learning with applications in Language, Vision and Control'			
Coordinator: CE/IT Dept			
Venue:	SOCET, AHEDAMABAD	Date:	16/12/2019 to 21/12/2019

Abstract:

A six-day Short Term Training Program on 'Machine Learning with applications in Language, Vision and Control' was organized from December 16th, 2019 to December 21st, 2019 by the Department of Computer Engineering, Silver Oak College of Engineering and Technology, sponsored by GUJCOST, DST and Government of Gujarat. This STTP was coordinated by Prof. HareshParmar (M.E. Computer Engineering), Prof. Viren Patel (M.E. Computer Science & Engineering), Prof. Vivek Shah (M.E. Computer Engineering), Prof. Abhishek Patel (M.E. Computer Engineering) and Prof. AtiGrag (M.Tech. Computer Engineering). The program aimed at empowering students, faculties and industrialists by making them learn and develop the understanding about the Machine Learning, Python and its libraries from scratch.

Expert Introduction

Mr. Vishal Modi: Mr. Vishal Modi is an experienced software engineer with a demonstrated history of working in the information technology and services industry. He is skilled in Machine learning, Tensorflow, Deep learning, Data Science, Computer Vision.

Ms. AeshaDoshi: Ms. AeshaDoshi is a software engineer at SoftVan Pvt. Ltd. She has deep knowledge in Machine learning, python and its libraries.

Mr.AkashPanchal: Mr. AkashPanchal is an experienced Research Engineer with a demonstrated history of working in the information technology and services industry. He is skilled in Artificial Intelligence, Python, Machine learning, Advance Java, Hibernate, Spring Framework, and Core Java.



Inauguration Function

The STTP started with the inaugural function.

The STTP was inaugurated with an innovative welcome speech using NLP (Neuro Linguistic Program) as main feature to enhance the effect of topic of our STTP. The experts were given warm welcome by the Co-ordinators of STTP and with the same the STTP was set open.

Over a period of 6-days, the following topics were covered as a part of this programme.

Day 1 - Session 1: Introduction to Machine Learning

Mr. Vishal Modi gave brief introduction on advantages of Machine Learning, Deep Learning and Artificial Intelligence.

Day 1 - Session 2: Introduction to Python Language

Session was continued by Ms. AeshaDoshi who conducted hands-on session on the basics of python language which included: string, and data types.

Day 1 - Session 3: Python Concepts

The expert helped in implementing python collection, dictionaries in python and related tasks were performed by participants.



Day 1 started with Introduction of Data Science

Day 2 - Session 1: List concept

The day begun with theoretical concept of list and it's indexing.

Day 2 - Session 2: Pattern making

Participant learnt to make patterns by deriving the special character.

Day 2 - Session 3: User Defined Functions

Expert gave insight on creating the users defined function in python.

Day 3 - Session 1: Pandas

Expert briefed about Pandas library for dealing with large data, data frame.

Day 3 - Session 2: Creating the series

Further the session was continued on pandas with main topic being creating series.

Day 3 - Session 3: Math operation on data analysis

Participants were given statistical data to give inference of the data through analysis.

Day 4 - Session 1: Data analysis, Data gathering.

Expert has covered session on data science. She has taught the participants data cleaning, data authentication, data validation of large data.

Day 4 - Session 2: Matplotlib

Graphical representation library, matplotlib is been explained, task on matplotlib concept was given.

Day 4 - Session 3: Panda and Numpy

Task based on panda and numpy library is given. Operation on IPL cricket match data was performed.



Day

5- ML Statistic with case study

Day 5 - Session 1: Image Processing and Open CV2 library

Participants worked on real time application using cv2 libraries.

Day 5 - Session 2: Image Reading, Writing, Saving, Working with Directories.

Fetching of Image from different directories and all other related tasks were performed

Day 5- Session 3: Video Processing

Extraction of frame from the video. Video read, write operation

Day 6 - Session 1: Scipy

The detailed explanation about scipy library is given. Image processing concepts were carried by this library.

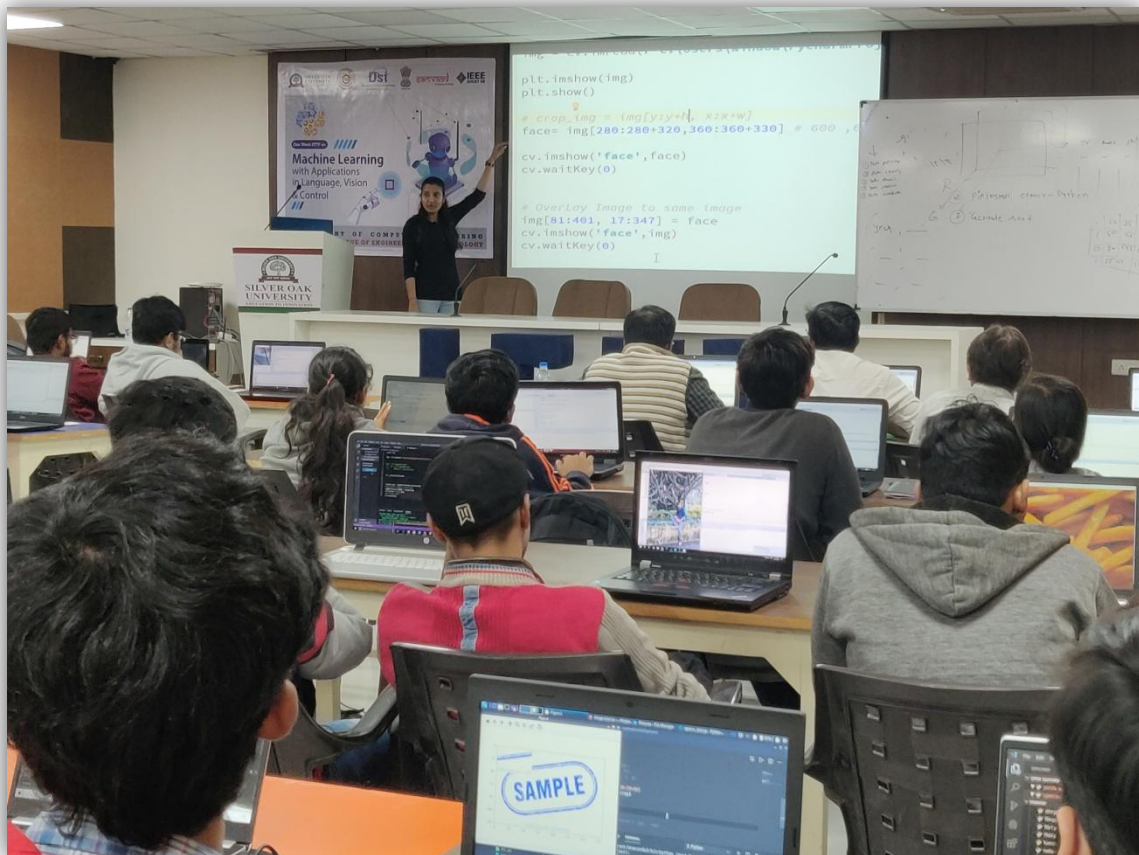
Day 6 - Session 2: Image Processing

Reading the image, writing the image using scipy libraries in different format.

Day 6- Session 3: Image Rotation and other manipulation

All different operations to be performed on the images were explained in detail.

A detailed explanation about the Best Practices for making the most out of the Machine Learning. The key highlight of the program was **Core Python, Libraries, and Machine Learning**



Day 6- Computer Vision

STTP ended with the Closing Ceremony.

Total 33 professors and students from different institutes participated in this six days STTP. This training program was successfully conducted and provided an

enriching experience to the participants. All candidates were satisfied with the course and had good experience of having practical knowledge of recent technologies. Felicitation of our expert, Ms. AeshaDoshi, was performed by HOD of CE dept., Prof SatvikKhara, and the STTP ended with a vote of thanks by the co-ordinator of STTP.



Certificate Distribution

Feedback from the participants:

- *Vanshi Patel: The tasks assigned daily were really brainstorming and forced us to think beyond our curriculum and invigorated innovative thinking.*
- *Rutvi Patel: Explanation by all the experts was easily comprehensible. Also, we had full support from our expert during hands-on session.*
- *Nisarg Bhatt: All the main topics of core python and ML were covered. Teaching methodology was good.*

- *Devansh Parikh: The method or the way to explain the concepts and topics of ML was very good. We had good assistance from the management as well.*
- *Fenil Das: Learned the latest terminologies with in depth knowledge in core python.*
- *AkshatSuthar: Enough practice in each topic was provided to help us retain the knowledge with us for long term.*
- *BrijrajsinhGohil: Simple explanation of complex topics. Also the management of entire program was very well arranged.*



Group Photo