



DON BOSCO INSTITUTE OF TECHNOLOGY, MUMBAI
DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION
ENGINEERING

IEEE-DBIT STUDENT BRANCH

Report on Workshop on ‘Image Processing and Machine Learning Using Python’

Topic: Hands-on Workshop on “Image Processing and Machine Learning Using Python”

Date: 21st, 22nd and 23rd July, 2020

Time: 11:30 am –12:30 p.m.

Venue: Live Zoom Meeting / YouTube

Speaker: Mr. Abhiram Pillai, Technical Secretary, IEEE -DBIT-SB

No. of participants: 20

Description:

The IEEE-DBIT student branch organized a hands-on workshop on Image Processing and Machine Learning on the 21st of July as a part of NEXUS 2020. The aim of the workshop was to provide the students with an introductory knowledge to Image Processing and Machine Learning using Python which will help them in future industrial development.

A) First day – 21 July, 2020

- The session commenced with an introductory speech by Mr. Kaustubh Deshmukh, the Publicity Head of IEEE–DBIT. His speech included the introduction to the workshop and NEXUS and later introduced the instructor for the workshop Mr. Abhiram Pillai.

- Mr. Abhiram Pillai took over and started the session by introduction to Google Collab and Jupyter Notebooks.
- With the introduction of Google Collab, he showed them examples by executing simple codes such as Hello World, image, charts etc. He also explained the functions of Google Collab.
- Once students were given an introduction, they were told to perform a Visualization using Altair Library and were given steps on how to do the required process.
- Later, he introduced NumPy, which is a library for the Python Language. Then, he introduced the next topic which was Indexing.
- Further, he showed the participants how to open images using Python Image Library (PIL) and introduced OpenCV an open source computer vision library. He also talked about the differences in color pattern in MatPlotLIB and OpenCV and how to resize the images.

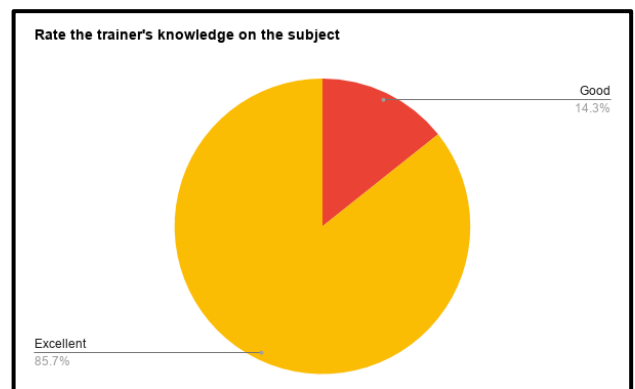
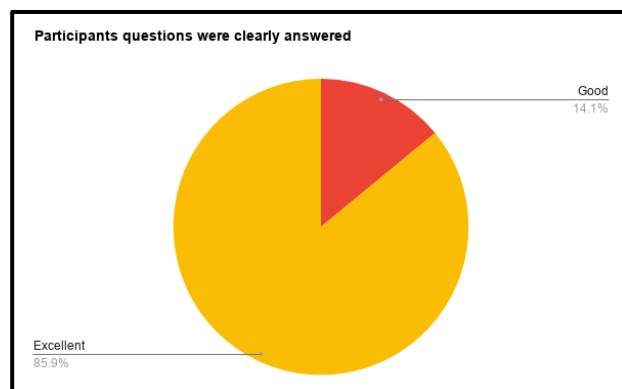
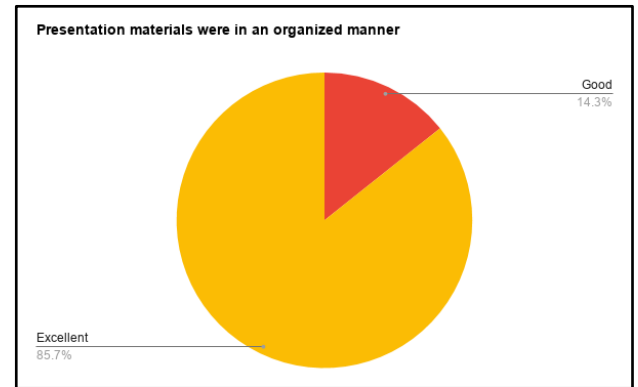
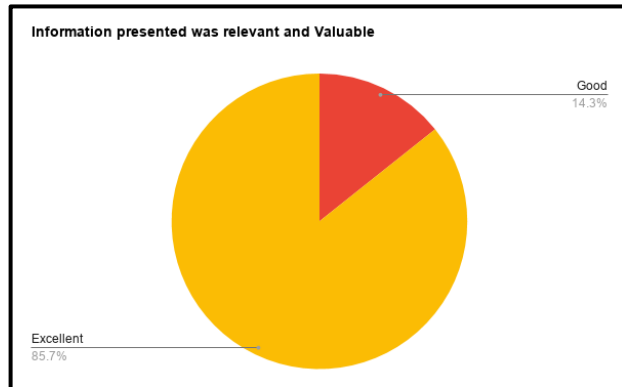
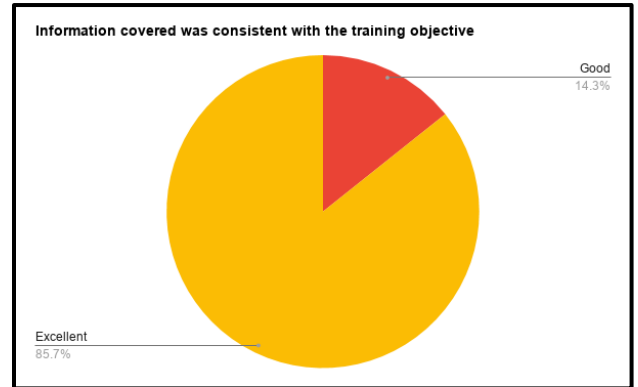
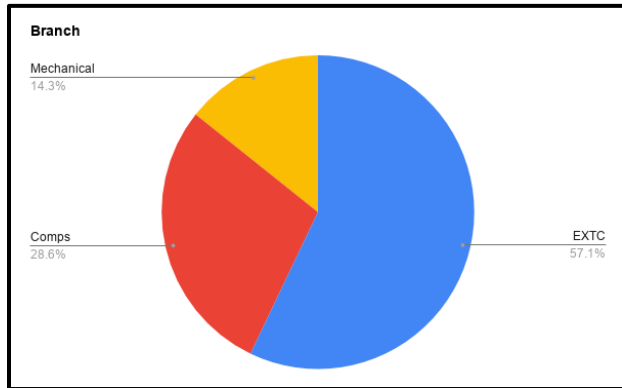
B) Day 2, 22 July, 2020:

- The second day started with face detection using Standard Python Language.
- The next topic was on programming using harcascade method and talked about the features and uses of this method.
- Further, he introduced ML and he showed an example of “Hello World” in ML.

C) Day 3, 23 July, 2020:

- The third day started with a session on ML project using Fashion-MNIST data set.
- Further, he also showed participants how to classify different clothing object using 70K images.
- The session concluded with a Q & A session with the instructor followed by a vote of thanks and a closing speech delivered by Ms. Ajitha Rajkumar after which the participants were informed about the upcoming events and were requested to fill the feedback forms circulated on the WhatsApp groups.

FEEDBACK ANALYSIS:



FEEDBACK SUMMARY:

From the above analysis we can see the overall reception to the workshop was highly positive. The higher majority of students are from EXTC followed Computer Engineering and Mechanical Engineering respectively. Many felt the overall workshop was satisfactory and informative and felt the trainer had a great knowledge on the topic.

EVENT POSTER:



The poster features a gradient background from orange to red. At the top left is the Don Bosco Institute of Technology logo, and at the top right is the IEEE DBIT Student Branch logo. The main text is centered and reads: 'DON BOSCO INSTITUTE OF TECHNOLOGY, MUMBAI' in white, 'WORKSHOP ON' in yellow, 'IMAGE PROCESSING & MACHINE LEARNING USING PYTHON' in white, '21ST - 23RD JULY, 2020' in yellow, and '5:30 PM - 7:00 PM' in white. A Python logo is on the left. At the bottom left, a white box contains 'Presented by IEEE DBIT'. At the bottom right, another white box contains the contact numbers: 'ABHIRAM : 77159 18599' and 'VARUN : 93263 35190'.

DON BOSCO INSTITUTE OF TECHNOLOGY, MUMBAI

WORKSHOP ON

IMAGE PROCESSING & MACHINE LEARNING USING PYTHON

21ST - 23RD JULY, 2020

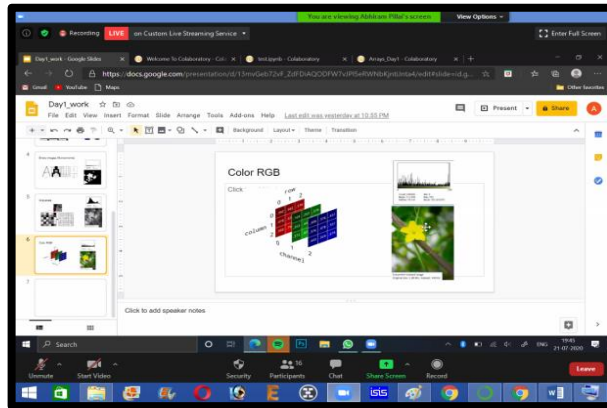
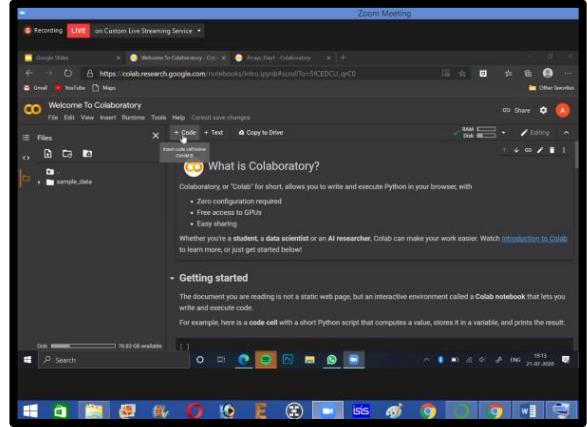
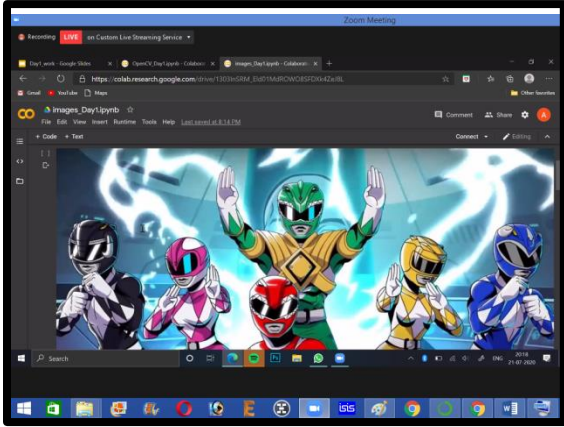
5:30 PM - 7:00 PM

Presented by
IEEE DBIT

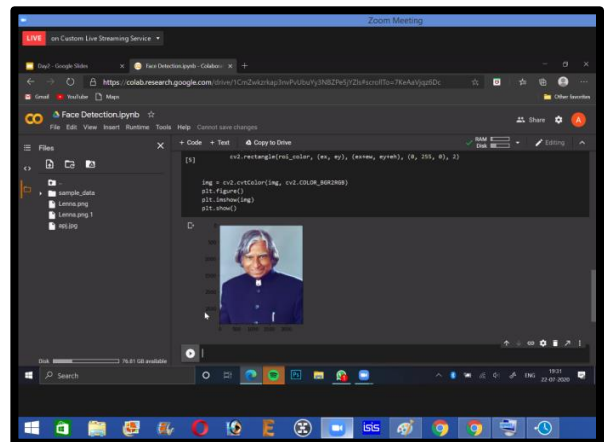
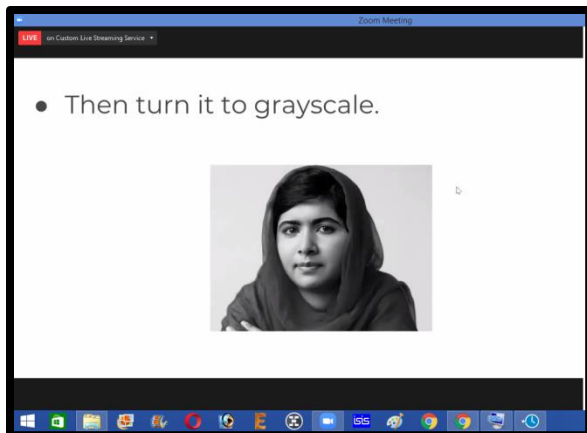
ABHIRAM : 77159 18599
VARUN : 93263 35190

Event Pictures:

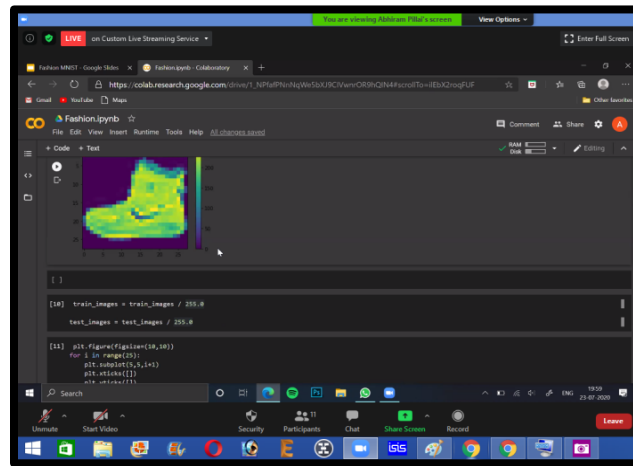
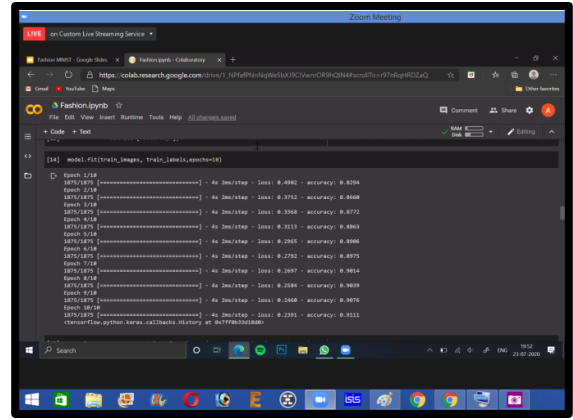
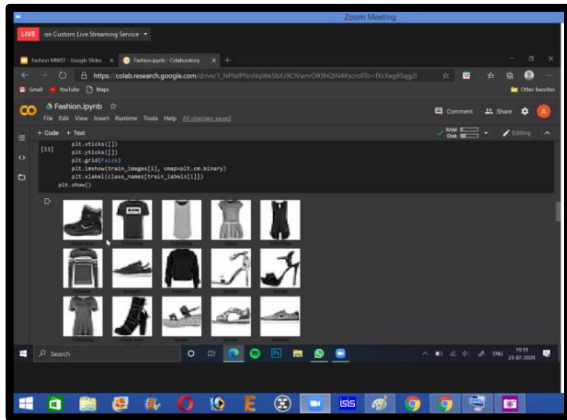
DAY 1



DAY 2



DAY 3



Report Prepared by: Mr. James Robin K. - IEEE-DBIT-REPORTING HEAD

Report Approved by: Ms. Gejo George - IEEE-DBIT SB Counselor