

SPRINT-1

TEAM ID	PNT2022TMID27588
PROJECT NAME	Real-Time Communication System Powered by AI for Specially Abled
DATE OF THE MEETING	26 -10-2022, 27-10-2022

MINUTES OF THE MEETING:

MEET - 1 & 2

- The process of data collection was discussed and procedure was implemented in the local system.
- The training images were tested and verified.
- The image processing procedure was detailly examined and discussed .
- The required python modules were installed and issues in the model were rectified .

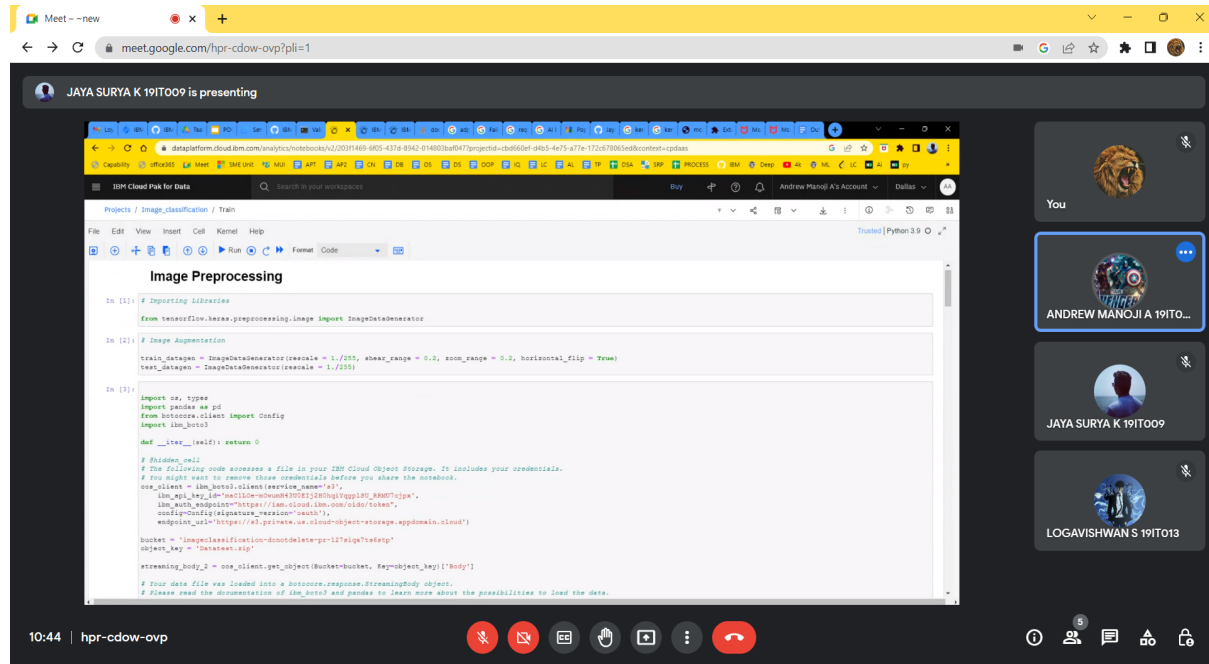
Data collection:

The screenshot shows a Google Meet interface. At the top, a banner indicates 'JAYA SURYA K 191T009 is presenting'. The main content area displays a Jupyter Notebook titled 'Data Collection'. The notebook code includes imports for 'os', 'type', 'pd', 'requests', 'Config', and 'ImageDataGenerator'. It defines a function 'test_data_gen' that uses 'ImageDataGenerator' to generate data. The code also includes comments about the data source and the use of 'requests' to download images. A file explorer window is open over the notebook, showing a directory structure with folders like 'Images', 'Documents', 'Downloads', 'Videos', and 'Pictures'. The file explorer shows a list of files and folders, including 'test_data_gen.py' and 'test_data_gen.ipynb'. The bottom of the screen shows the Google Meet controls, including a timer at 10:47 and a meeting ID 'hpr-cdow-ovp'.

MEET - 3 & 4

- The image processing process was discussed and explained to everyone what we have understood.
- The tutorial was reviewed and the processed step by step to execution.
- Few issues in installing the python packages were discussed and solved referring some stackoverflow suggestions.

Image preprocessing:



SPRINT- 2

TEAM ID	PNT2022TMID27588
PROJECT NAME	Real-Time Communication System Powered by AI for Specially Abled
DATES OF THE MEETING	02-11-2022, 03-11-2022

MINUTES OF THE MEETING:

MEET - 5 & 6

- The steps were followed exactly to setup an account IBM cloud.
- The registration of IBM cloud account was done and the password setting issue was cleared for everyone.
- The model building of the module was discussed and implemented in the Ibm cloud.

MEET - 7 & 8

- The required packages were installed and imported .
- The issues in installation of packages were cleared.
- The dataset was imported in Ibm cloud and it was unzipped using python code.
- The model was trained using the given training images in the dataset.

Model Building and training:

The screenshot displays a Google Meet interface. At the top, a browser tab shows the URL 'meet.google.com/hpr-cdow-ovp?pli=1'. Below the browser, a presentation titled 'JAYA SURYA K 191TO09 is presenting' is shown. The presentation content is a Jupyter Notebook titled 'Model Building'. The notebook code includes the following steps:

```
In [10]: # Importing Libraries
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense
from tensorflow.keras.layers import Convolution2D, MaxPooling2D, Flatten

In [11]: # Initializing the Model
model = Sequential()

In [12]: # Adding Convolution Layer
model.add(Convolution2D(32, (3,3), input_shape = (64, 64, 3), activation = 'relu'))

In [13]: # Adding Pooling Layer
model.add(MaxPooling2D(pool_size = (2, 2)))

In [14]: # Adding Flatten Layer
model.add(Flatten())

In [15]: # Adding Hidden Layer
model.add(Dense(units = 512, kernel_initializer = 'random_uniform', activation = 'relu'))

In [16]: # Adding Output Layer
model.add(Dense(units = 9, kernel_initializer = 'random_uniform', activation = 'softmax'))

In [17]: # Compile the model
```

On the right side of the screen, a list of participants is visible, including 'You', 'ANDREW MANOJI A 191TO...', 'JAYA SURYA K 191TO09', and 'LOGAVISHWAN S 191TO13'. At the bottom, there are icons for chat, share, and other meeting controls. The bottom status bar shows the time '10:45' and the meeting ID 'hpr-cdow-ovp'.

SPRINT- 3

TEAM ID	PNT2022TMID27588
PROJECT NAME	Real-Time Communication System Powered by AI for Specially Abled
DATE OF THE MEETING	7-11-2022, 8-11-2022

MINUTES OF THE MEETING:

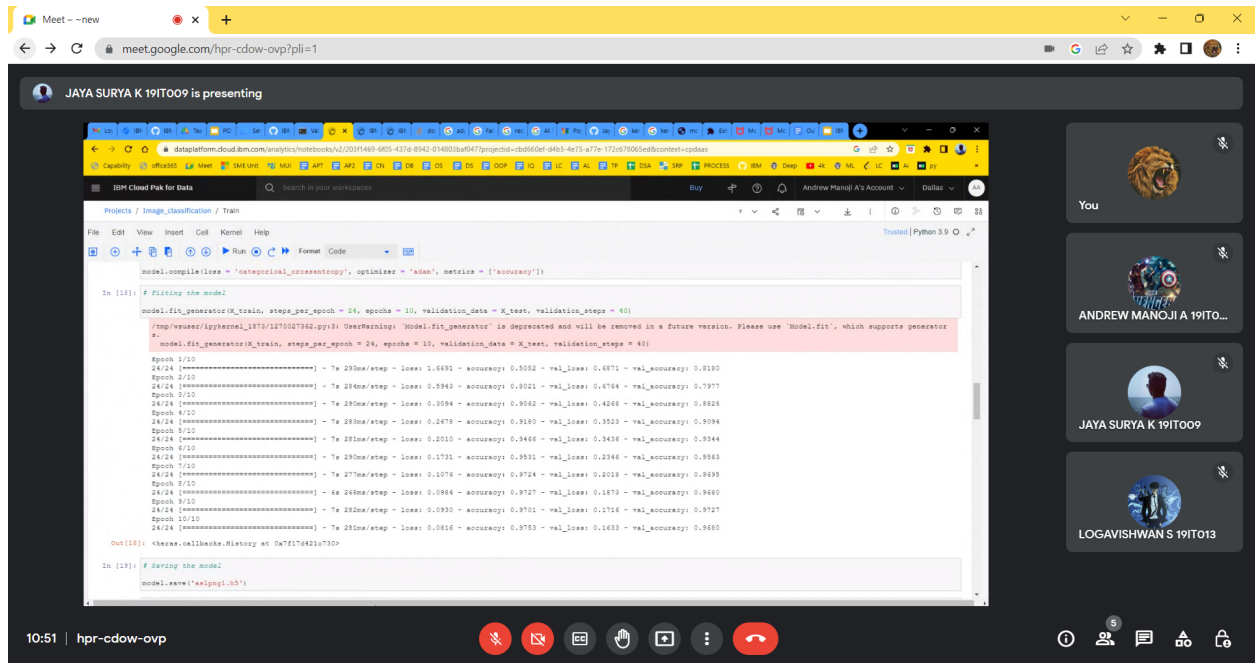
MEET - 9 & 10

- The model trained in the earlier sprint was saved and loaded using the `model.load()` function.
- The training of the Machine learning model was made to some amount of epoch to have better accuracy.
- AAll the RAM utilization problems were discussed and solved with the reference of few youtube videos.

MEET - 11 & 12

- The loaded model was tested using the sample images provided in the testset of the dataset packages.
- The errors in the testing model were rectified and the correctness of the model was improved.

Training and testing:



SPRINT - 4

TEAM ID	PNT2022TMID27588
PROJECT NAME	Real-Time Communication System Powered by AI for Specially Abled
DATE OF THE MEETING	14-11-2022, 15-11-2022

MINUTES OF THE MEETING:

MEET - 13 & 14

- The train and test model was integrated with an HTML page with Flask application.
- The flask application development was discussed and done with video reference provided in the Ibm cloud.

MEET - 15 & 16

- The API routes were built in the flask application and the python code for the opencv module was built under the prediction route.
- The model was loaded and it was made to read the real time human signals with the help of opencv2 and keras.
- The output was then tested and verified.

Implementation of the application:

