

RELATED SOFTWARES

- Operating System : Windows 8/10, Linux
- Technology : Python 3.7
- IDE : Spyder/Anaconda
- UML : ArgoUML

CODE EXECUTION PROCESS

Creation of images

- 1) Collect the videos of all the students to be trained.
- 2) Loop over all videos and convert each video into images.
- 3) Extract the labels from each image.

Training

- 1) Loop over all the images extracted from videos
- 2) Pre-process the images
- 3) Perform one hot encoding on labels
- 4) Load ResNet50 pre-trained with imageNet weights as the baseModel
- 5) Create a new headModel using the base model
- 6) Compile the model with Stochastic Gradient Descent
- 7) Save the model and label binarizer
- 8) Evaluate the network

Testing

- 1) Load the model and label binarizer
- 2) Provide the path of student's video to be tested
- 3) Read frames from the video stream and pre-process each frame
- 4) Make predictions on the current frame
- 5) Find the label with with the largest corresponding probability across the average predictions

Attention Span Detection in online sessions

- 6) Draw the prediction on the output frame

SCREENSHOTS



Fig:student1



Fig:student2

Attention Span Detection in online sessions

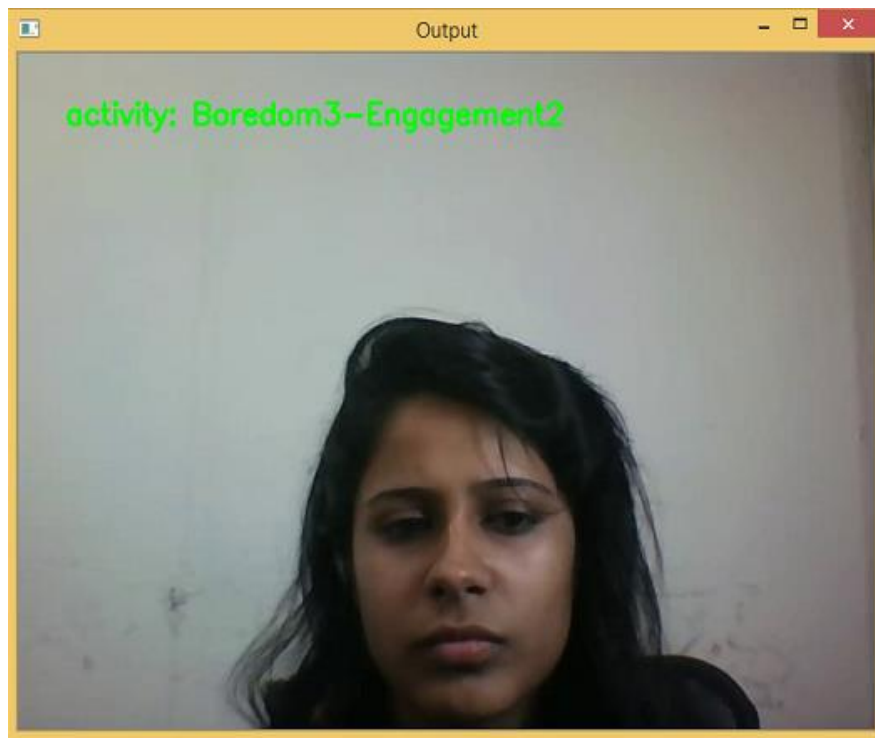


Fig:student3



Fig:student4

Attention Span Detection in online sessions

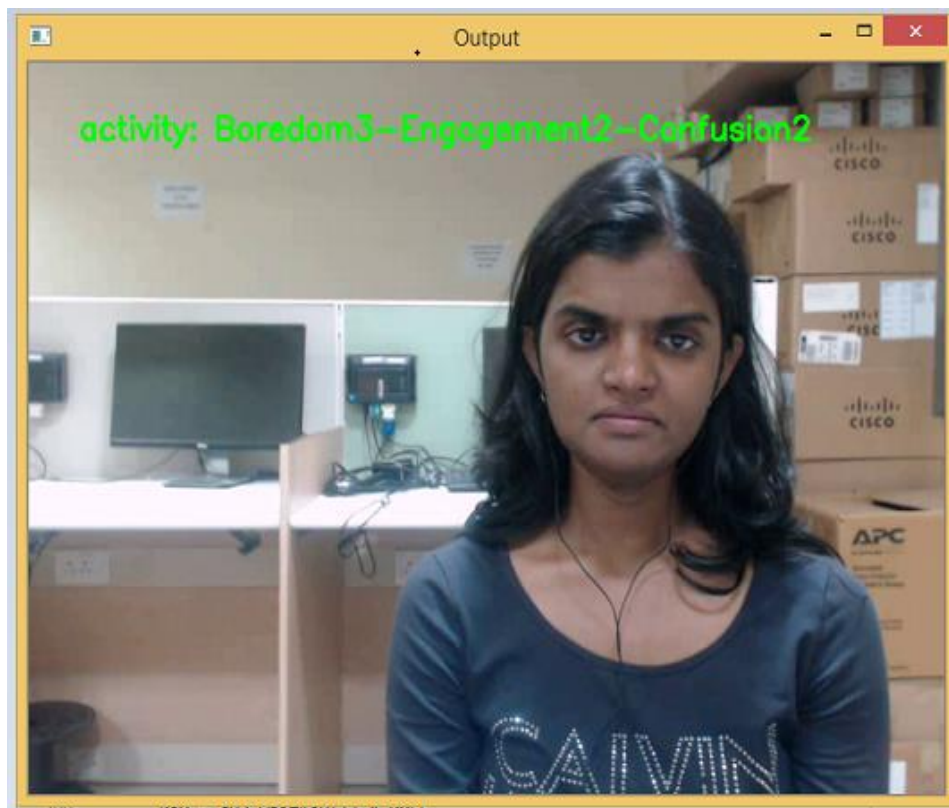


Fig:student5



Fig:student6

Attention Span Detection in online sessions



Fig:student7



Fig:student8

