REAL TIME
2D POSE ESTIMATION

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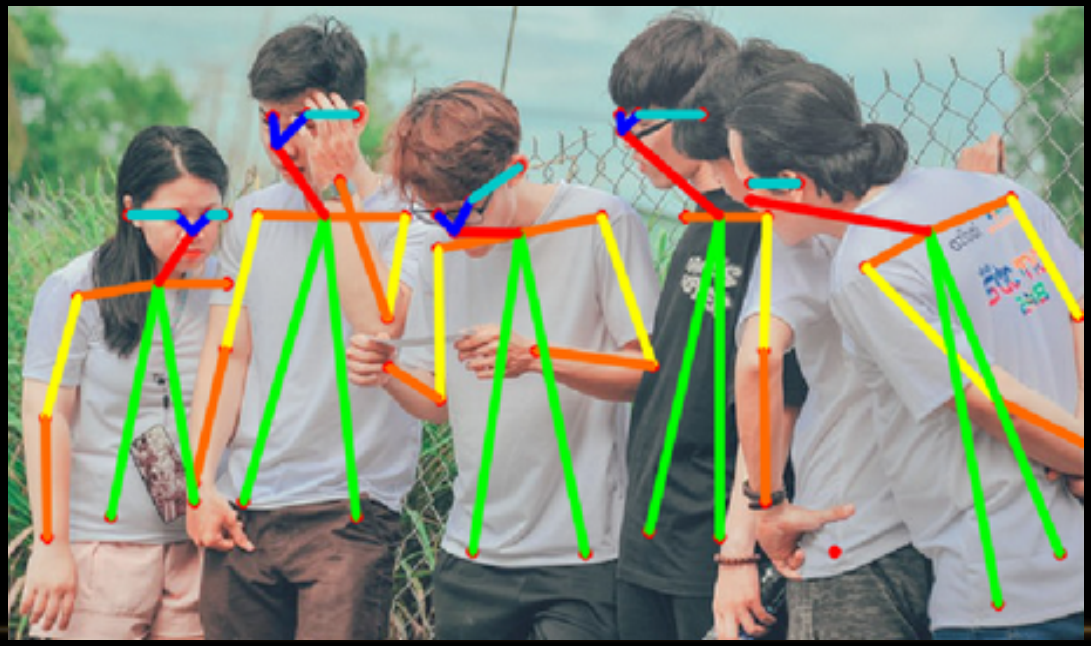
AGENDA

- Introduction
- Dataset used
- Architecture
- Requirements
- Libraries used
- Model used
- Applications
- Output screenshots
- Conclusion

INTRODUCTION

- Pose Estimation is predicting the body part or joint positions of a person from an image or a video.

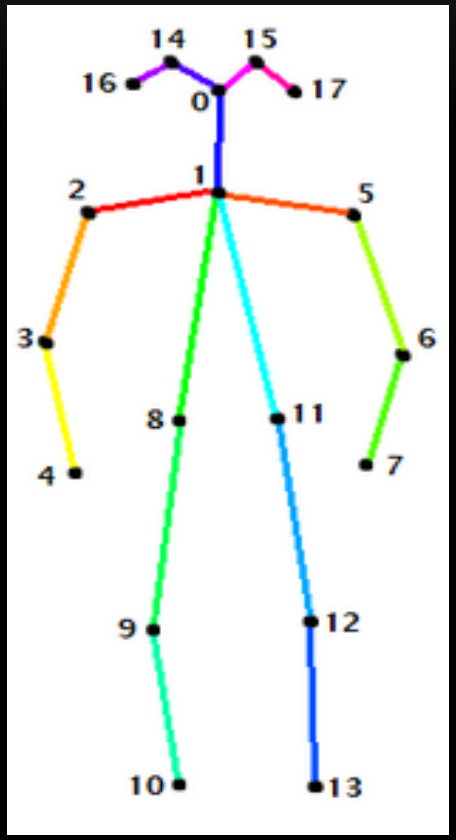


DATASET USED

- We have used COCO Dataset (Common object in context dataset)

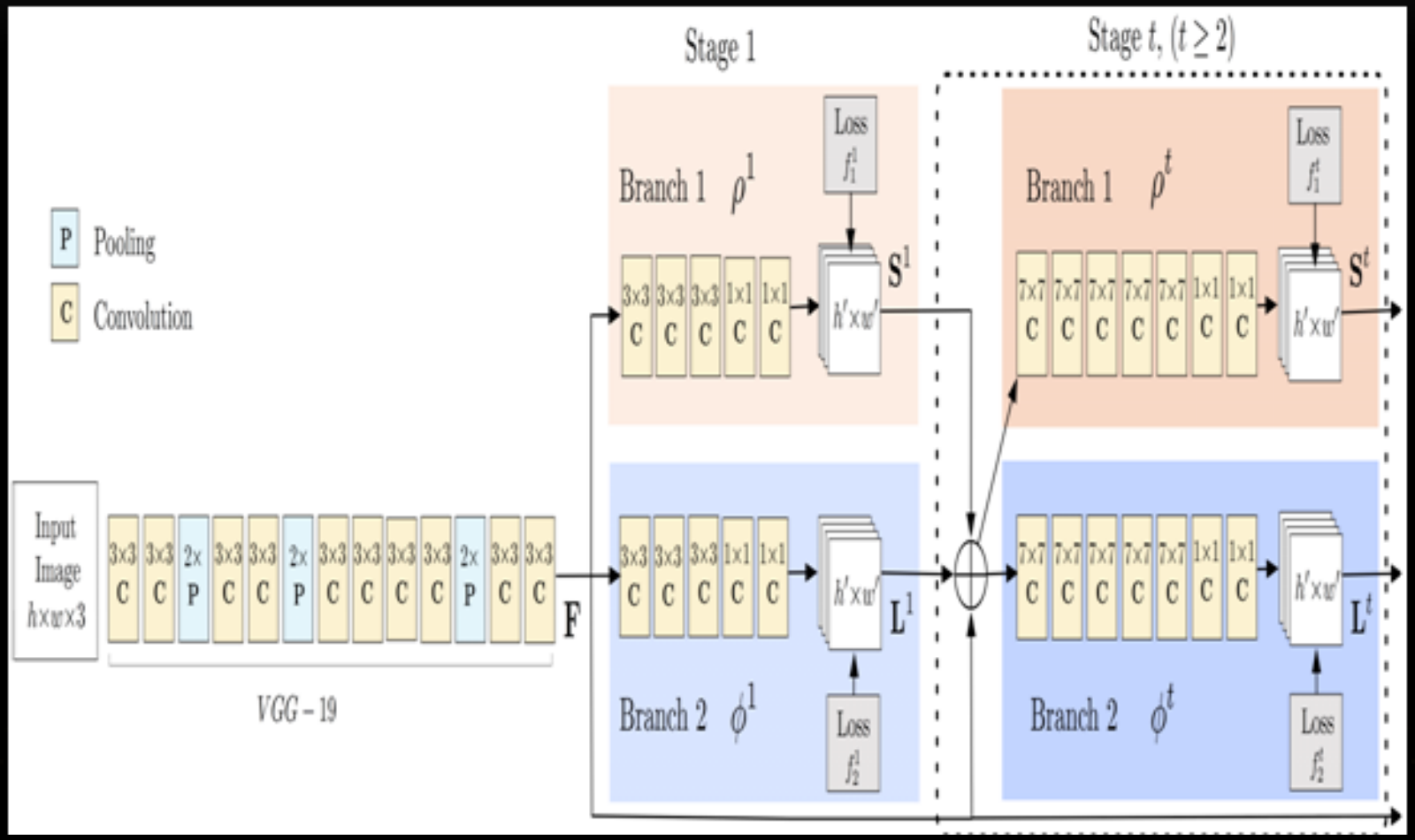
- 330 k Images

- 250,000 people trained with 18 key-points



ARCHITECTURE

- The model takes input as color image of size w*h and produces key points for each person in the image.



CONTINUE…

- Confidence maps
- Part affinity fields

REQUIREMENTS

- Ubuntu(64bint) / windows(64bit).
- Python 3.6 .
- Create Environment.
- Activate Environment.
- Install required libraries.

LIBRARIES USED

- Open cv
- Sliding window
- SciPy
- Matplotlib
- Tensorflow

LIBRARIES USED

- Numpy
- Argparse
- Logging
- Time

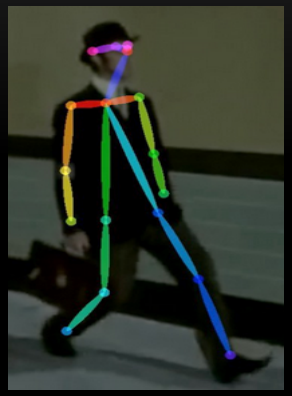
MODEL USED

- Tensorflow offers various pre-trained models.

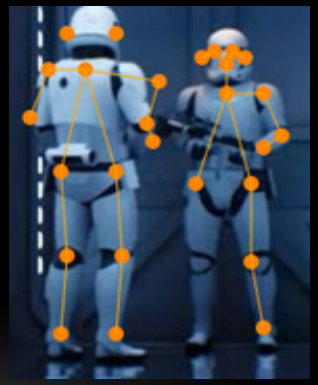
- Inception
- Mobilenet
- Resnet

APPLICATIONS

- Activity recognition



- Training robots

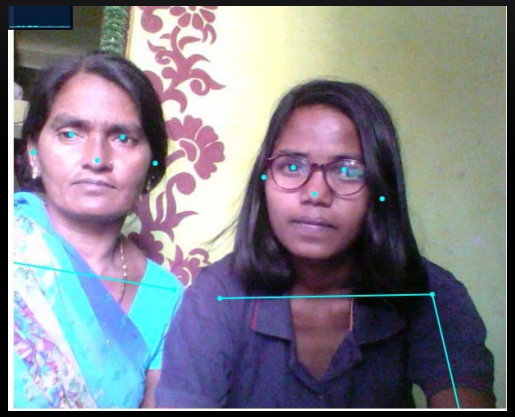


OUTPUT SCREENSHOTS

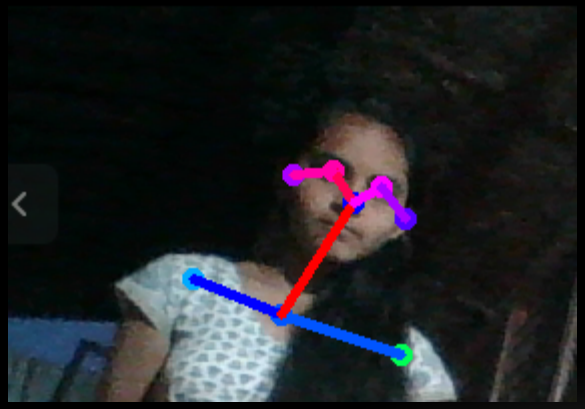
Object detection

Keypoints identification For single person

OUTPUT SCREENSHOTS

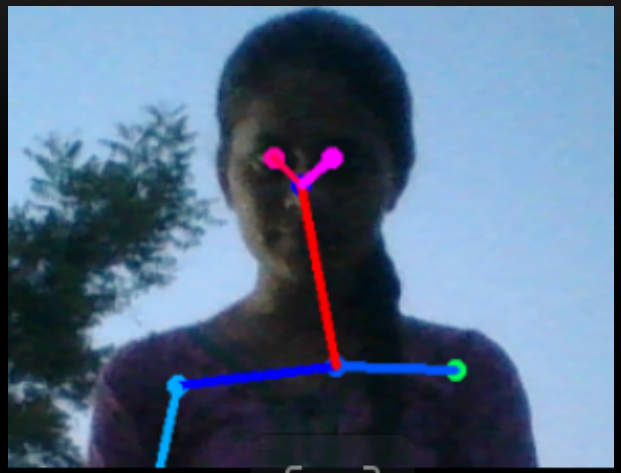


Keypoint identification For multiperson



Pose estimation

OUTPUT SCREENSHOTS



Pose estimation

Pose estimation For multi person

CONCLUSION

- Real time multi-person 2D pose estimation is a key component in enabling machines to have an understanding of people in images and videos.

THANK YOU !