Masters Thesis Weekly Notes

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September 2023

1 Weekly Meetings Tasks:

1.1 Week 1: (21/09/2023)

1.Take a subset of the chosen dataset and build the basic model and check whether it is working as expected or not. If yes, then apply the model to whole dataset.
2.On github - create new repository and add sir to it to keep all work in sync.
3.Take conventional backup for every week.
4.Replicating the Yog Net model and also check for the technical feasibility.
5.Use latex - Week to week take notes from the meeting.
Tasks for next week:
a.Create repo and keep all your writings on your github - Done
b.Easier for the documentation use Latex - Done
c.Use gmail account for github. - Done

1.2 Week 2: (27/09/2023)

Step 1: Check for the existing and available code to understand the flow of the project.
Step 2: Identify the initial step required for the project.
Step 3: Access the dataset and try to use it to implement the first step of the project.
Step 4: Start the coding.
Completed tasks:
a. Found coding logic that I can refer to while coding.
b. Identified the initial step - Key Point Detection.
c. Started the coding by trying to access the dataset and use it for the keypoint detection.

1.3 Week 3: (04/10/2023)

Tasks: Start the modelling of the basic model - Body detection (Key Point detection). Check whether its working as expected and then apply the remaining advanced logic. If at all it seems that the logic is not working as expected, then

we have a option of changing the context - instead of taking images with yoga postures, take the normal people images in which simple gestures are present like sitting in a chair, standing with wrong posture which will be detected by the algorithm.

Completed Tasks:

Started the coding of the said model.

Database Used Link: https://data.mendeley.com/datasets/k842kz6v4n/1

New Updated Dataset Link: https://www.kaggle.com/datasets/tr1gg3rtrash/yoga-posture-dataset

For reference, using following code: https://github.com/KhushiBhambri/YogNet.git

1.4 Week 4: (12/10/2023)

Tasks:

Work on getting annotations for the human body images present in the dataset. Once keypoints/annotations are obtained go ahead and start model building with the training data - create basic prototype using YOLO or similar suitable library. Once it is trained using training data, model performance will be evaluated using test data. The model/prototype should work on any dataset having proper annotations. It should not be dataset dependent. Build a basic model in proper working state.

1.5 Week5: 28/20/2023

Tasks:

After successfully finding the key points from the images of the chosen dataset, move ahead with the classification of the images. Use the labeled for the classification task.

Two approaches:

1)Do the classification using the obtained key points.

2) Do the classification by giving the images by considering only that area which is covered in the keypoints only, not the whole image as input to the classification model.

This way a comparison can be done and will help in processing the images in two ways with two results.