

Meeting Agenda (week 7)

Date Month Year, Duration

16/4/2021 15:00pm-17:00pm

Attendance:

Member	Attendance
Yuliang Ma	Yes
Jiawei Fan	Yes
Yuchen Wang	Yes
Xiaoxiang Kong	Yes
Yimin Xu	Yes

Tasks review (from last meeting):

1. We have found some open-source algorithms doing person age, gender and activities.
2. Age, gender can be extracted using some pre-trained models. We have implemented it and test the model using some online sources and the results are satisfactory. CaffeNet is used to predict the age and gender of a person.
3. SoW has been updated and meeting minute with client has been documented.
4. Colour of hair is not of interest and does not reflect some important information about a person, therefore, it is discarded.

Main objectives:

1. Discuss the technical progress

Technical progress:

1. The mediapipe group has further divided into small groups. Two people has been working on the mediapipe model, which can be used to extract activities from the video. Another person has researched into the CaffeNet and successfully implement the function of extracting age and gender labels from the video.
2. Team members have met some difficulties in developing the mediapipe models. We need to source the training and testing videos online by ourselves. Additionally, we need to trim the online videos to satisfy the training and testing conditions. The workload is a bit high. Therefore, it is decided that we will leave cafenet there and three members in the mediapipe team will do the activity classification task together.
3. Yolo sub team still have the difficulties of implementing the Yolo model. One team member has found other methodologies that use OpenCV packages to separate objects. The whole team has a

look at the output of that algorithm, the model's result is unsatisfactory. The objects extracted out are not accurate and there exists some lags when doing the extraction.

4. We decide that if the Yolo team cannot make more progress before the end of next week. We will skip Yolo model and only use Mediapipe model. Although we may encounter problem for example, other objects other than person cannot be successfully extracted, it is fine because we mainly focus on person demographic information and activity.

5. Currently, we are using the average of results of detection as the final labels. We think it is inaccurate because there might be some frames of the videos showing nothing important. Data of those frames might be outliers. If those data are calculated in, the result is expected not to be accurate. Therefore, the team decides to use the most frequent labels in the videos as the final labels. This can be done by using counter method.

6. We also think about the output format of the mediapipe model, a txt file is decided as the output because it is clear and easy to maintain and modify.

7. Team members continue to source videos online. We will then divide those videos to 75% training set and 25% testing test. We will evaluate the model performance based on the test accuracy because test set remains unseen when training the model.

Task delegation:

Name	Task
Yuliang Ma	Mediapipe model build up
Yuchen Wang	Update SoW, get source video
Jiawei Fan	Adjust output format and create txt file
Xiaoxiang Kong	Continue working on Yolo model
Yimin Xu	Look for other models that can be substitution of Yolo model