Project Review-2

Project Title : Searching a video database using Natural Language Queries

Project Guide : Dr Mamatha

Project Team : Aditeya Baral, PES1201800366
Vishesh P, PES1201800314
Anirudh HM, PES1201800131
Vinay Kirpalani, PES1201800218

PES UNIVERSITY

Expected Outcome at the end of the project/Contest

At the end of the specified timeline, we will be able to extract all videos which are contextually or semantically related to a particular natural language query.

• The user will be able to use keywords and phrases used in natural conversational speech, such as a movie title or any specific scene in any video like either a protagonist or any object, and movies containing the specified described frames will be pulled out

• These frames will be analyzed and the video with the most matching frames will be picked and displayed.

PES UNIVERSITY

Work Plan For the coming weeks

- We will try to further increase the accuracy and retrieval speed of our application by attempting to transcribe videos and store their transcript and perform matches using this too.
- This will help us in obtaining more matches present in the natural language query
- We will also be tagging the video datasets based on objects present in the video and even try to expand upon the database by performing similar matches online like Google

PES UNIVERSITY

Progress as on Date

- We have used various algorithms to extract meanings and keywords from the speech input
- We have used speech recognition to not only translate it into text, but also convert other natural languages into English and then convert it into a processable form
- We have also used various API's such as IBM Watson to obtain more keywords and relevant features from our speech input to further increase the accuracy of our searches
- We are currently in the process of transcribing large videos and are building a model for object detection in video frames

PES UNIVERSITY

Any obstacles/challenges and any Assistance Required

- We are still trying to perfect speech recognition for various accents since it throws it off sometimes
- We are trying to transcribe large videos in minimal time

Key Deliverables for the next milestone

- We hope to be able to finish off the project by perfecting the object detection model

PES UNIVERSITY

Summary

- Our work is going as planned by our team and we have finished about 60% of the expected project.
- We hope to continue to work on this and finish our planned objectives and start work on the final integration, which will be our next goal
- We are also working on the efficiency and are planning on implementing parallel searching and extraction which will reduce latency and bring in faster results.

PES UNIVERSITY

Thank You