Project Proposal

In past couple of years there has been a pursuit in realisation of the true potential of Video Based Learning as a result of new forms of online education; Massive Open Online Courses (MOOCs) being one of the many examples in order to engage learners in a self-managed and intuitive learning experience. However, current automated approaches like using Artificial intelligence in form of machine learning suffer from several limitations like finding interesting insights from the videos rather than just understanding the commentary or identifying objects in the video. Due to lack of annotations in the video, its power to reach out to the global audience takes a back seat simply because it's not searchable on the web. Most of the videos are just given a topic that describes very briefly what the video is all about and sometimes that is not enough.

To demonstrate a concrete example, imagine there was some topic mentioned at 30th minute of an hour long video. There is no way for somebody who is doing some study or research in that same topic to stumble upon this video since the video never had proper annotations which mentioned that topic as part of its metadata which could be easily searched over the web.

So, as part of this project we propose a system to automate the process of annotating videos. The approach is to develop a web platform for the crowd to view the videos (eg:highlights of an ice hockey game) with a set of questions to answer. In the first round a fixed number of crowd workers will be asked to annotate each video which would be 4-5 minutes long and submit the result. For the second round, the result/annotations given by the first round workers will then be displayed for another set of users along with the video to verify the quality of the annotations which would filter out the noisy data or wrong annotations. And the final result or annotations is decided based on this two-stage filtering process along with majority voting.

The application of this process ranges to varied platforms such as coursera videos,edx or millions of informative unannotated videos available online.

Datasets:
Ice Hockey Videos from Youtube and other video content sites