Project Proposal

Title

- Geo-Tagging in an offline video stream

Team Members

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2. Harsh Shah
3. Manjari Akella

Main Idea

- The aim of the project is to generate location tags for a video by identifying the monuments/places that appear in the video stream.

Application / Scope

- It can be used for identification of all the locations that a movie has been shot at.
- It can be used to automatically segregate videos in a repository based on their location.

The Problem

- The problem that we are addressing is that of adding geographical information to a video stream. The objective is to tag a video with a label which tells about the locations that appear in it.
- We propose to use the prior knowledge of monuments/important places of a location to achieve this.
- The following steps are involved in this project –
    1. Get frames from the video (5 second interval)
    2. Get features to represent these frames
    3. Get features to represent the training database
    4. Use classifiers to find labels and tag the video

ML approach

We will perform a comparative analysis of the following ML classifiers –
    1. Naïve Bayes Classifier
    2. Multi-Layer Perceptron
    3. Support Vector Machine
    4. K – Nearest Neighbour

Data Acquisition

- We propose to manually form a data set by collecting images and video from the Internet

Distribution of Tasks

- **Gaurav**
  - Get frames from input video
  - Classification using Naïve Bayes Classifier
  - Classification using Multi-Layer Perceptron
- **Harsh**
  - Extract features from frames sampled from the video
  - Classification using Support Vector Machines
- **Manjari**
  - Extract features from training database images
  - Classification using K-Nearest Neighbour Classifier