



Popularity over time – Analysis of Videos on Youtube

Motivation

Today, video download and video streaming sites heavily contribute to the overall traffic on the Internet. The reduction of traffic and an increase in performance are interest when e.g. providers might want to optimize their service and reduce costs.

From a theoretical point of view, one may be interested in the overall behavior and the dynamics of popularity, which is not well-understood as it is centered around human behavior. While this may seem academic, results would be important to realistically answer the practical question above. A lot of work centers around Power Law distribution or not.

The goal of this work is not on discussing these statistical issues. The goal is to be able to better model user behavior on youtube. Changes over time are not covered by such distributions. We have some passive measurements and want to perform active measurements (via scanning website or using its API) to obtain popularity relevant data, e.g. popularity distribution in a short time interval, time between first and last view of a video, how the popularity of related videos evolves over time (Similar? No impact?), ...

Your Task

- 1.) Study previous work
- 2.) Conceptual work on modeling / describing changes in popularity
 - a. With help of existing measurement data
- 3.) Write scripts to scan video sample sets on youtube or use API (active measurement)
- 4.) Continuous active measurement to measure changes (frequently collect number of hits and other statistics from website → changes over time)
- 5.) Analysis of obtained active measurement data with respect to dynamics / changes in popularity
- 6.) Analysis of other data also obtained (e.g. stats for socially related videos)

Requirements

Graphs, Statistics, HTTP, HTML, Scripting (e.g. Python), Tools

Keywords

Popularity, Dynamics, User-Generated Content

