

Lab 7 - Bit 'N Bytes Youtube Data

Incremental Analytics:

Tag average

- Store data of
 - Number of videos in a category
 - Number of tags of the category
- When updated, increment values accordingly
 - Insert: Number of tags added to total, number of videos + 1
 - Delete: Number of tags removed from total, number of videos - 1

Performance Improvements:

- Decouple analytics from each other
 - Load button for each individual analytics feature instead of a unified one
 - Deactivate unified button
 - Refresh button on top of each chart/table
- Optimize top trending n videos algorithm
- Optimize videos trending for n days algorithm

User Test Cases:

Test Case #	Test Case Description	Test Input	Expected Output
1	Refresh button on x analytics feature only reloads the selected analytics	1. Insert new video in top trending category 2. Press refresh on top trending categories bar chart	Categories bar chart should refresh and number of videos should increase in the category of video you inserted
2	Refresh on top trending n video algorithm finishes in reasonable time	Refresh top trending n videos table	Data loads in less than 5 seconds, with no drawn out delay on client side.
3	Refresh on videos trending for n days algorithm finishes in reasonable time	Refresh on trending for n days table	Data loads in less than 5 seconds, with no drawn out delay on client side.

4	Incremental analytics for average # of tags in trending categories	<ol style="list-style-type: none"> 1. Insert new video with 100 tags in Comedy category 2. Reload analytics 	<p>Runtime of average tag category function should be less than it was on the applications initial boot.</p> <p>Example: Initial load 19ms runtime</p> <p>Example: Subsequent load (after cache has been set up) 10ms runtime</p>
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