The Tube Over Time: Characterizing Popularity Growth of YouTube Videos

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Abstract
In this work, we characterize the growth patterns of video popularity on YouTube. Using newly provided data by the application, we analyze how the popularity of individual videos evolves since the video’s upload. Also with this data, it was also possible to characterize the types of the referrers (external links) that most often attracted users to each video. We compared popularity evolution and referrals for three different datasets: videos which were promoted, copyrighted and selected according to a random procedure.

Evolution of Popularity in YouTube

Problem:
• How does video popularity evolve?
• How do users find these videos?

Basic Statistics:
• YouTube search is the second most queried search engine (2009)
• 2 Billion views per day (2010)

For whom is this important?
• Content creator and video partners
• Internet providers, caching services, CDNs
• Online marketers

Data Collection
We collected the cumulative growth in popularity and top ten referrers for each video
• Top: Videos which appeared on top lists (promoted)
• YouTomb: Copyrighted videos
• Random: Selected based on random queries

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