

Finding Topic-specific Trends and Influential Users in Social Networks

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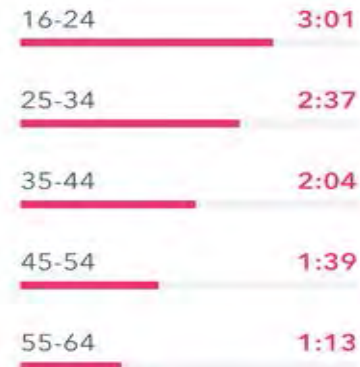
Average time spent engaging with Social Networks during a typical day

Average h:mm spent engaging with/connected to social networks/services during a typical day

OVER TIME



BY AGE



BY REGION



**16-24s spend
3 hours per day
on social media**

- Need to find topic related influential entities

Proposal for Estimating Influence on a Specific Topic

- **Topic Representation:** initial hashtag h_i + N-top similar hashtags $\rightarrow H$
- Tweets, users and urls which have used a hashtag of H
- Find the most influential **users** and **urls**
 - social activity-based **metrics** related to tweets which contain the specific hashtags

$$InfUserHashtag(u_i, h_j) = w_A * A(u_i, h_j) + w_E * E(u_i, h_j) + w_P * P(u_i)$$

Adaptation

Endorsement

Preference

User's influence on a specific hashtag

User's influence on a specific topic

$$Inf(u_i) = \sum_{j=1}^N w_j * InfUserHashtag(u_i, h_j)$$

$$Inf(l) = w_{likes} * \left(\frac{TlNoLikes}{TlNoTweets} \right) + w_{retweets} * \left(\frac{TlNoRetweets}{TlNoTweets} \right)$$

Url's influence on a specific topic

Implementation of the Proposed System- Technology and Data

- Apache Spark framework
- Twitter Rest API
 - 72.000 tweets for different groups of Twitter users

- Format of tweets:

UserId|TweetId|CreatedDate|Lang|text|Fav
Count|ShareCount|#|...|#|url|...|url|

- For each user we stored the following data:

UserId|FollowersCount|FriendsCount|Status
esCount

Thank you!



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