Discovering controversial points in news articles
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Motivation and Goal

- **AIM:**
  - To find and rate news articles according to the amount of attention it is receiving on social networking sites.
  - Create a platform where news articles and related comments can be viewed side by side.
- **WHY?**
  - Social Media has become one of the fastest ways to share news on a global scale.
  - It is necessary to keep track of public opinion.

Overall Method

- Collecting the news and social media comments for a set of topics.
- Score each sentence using the controversy function.
  - Sentence-level scoring can be directly used to quantify controversy of each article.
  - Hence, we nominate the top-K most controversial issues.

Web Interface

- Users can:
  - Search for articles related to a set of predefined topics
  - Search for topics of interest
  - Retrieve relevant tweets for each article
    - Tweets related to the most controversial sentences in a news article
  - Contact everyone on our team

Controversy Detection Formula

- Assuming independence between the features, the joint entropy equals the sum of their individual entropies.

Final entropy-based scoring function for a sentence $S_i$

$$Score(S_i) = H(X_{sent}) + H(X_{topics}) + H(X_{tweets})$$

higher value: more controversial

Scoring news articles

The controversy detection function scores each sentence individually.
The score of a news article $A$ is the sum of scores of each of its sentences

$$Score(A) = \sum_{i=1}^{n} Score(S_i)$$

Similarly, we can score topics
- provided that each document covers a specific topic or a set of topics

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