Visual analytics for exploring online conversations

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It is needed to **summarize** and **understand** textual data

Promising solution: Topic modeling
- Statistical approach for extracting **topics** from large text corpora.
- Topic models do not provide meanings and interpretation directly
  - **humans must be involved** [1]

Humans who directly interact with and interpret the output of topic modeling **may rely on visualization tools to better interpret the results** [2]

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Topic modeling interpretation


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Topic modeling interpretation


Topic Modeling Interpretation


Finding mechanisms to improve these visual representations is still an open challenge [1]

Recent research efforts

ConVIScope Views (see §4): Metadata (A), Topics (B), Analysis (C) and Conversations (D).

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Datasets

Text:
- Ubuntu Dialogue Dataset
- Amazon QA dataset: https://jmcauley.ucsd.edu/data/amazon/qa/
- Alexa Topical Dataset (Alexa prize competition)
- Movie Dialogue Corpus
- More?
  - ParlAI Framework has incorporated a variety of text datasets for downstream NLP Tasks: https://github.com/facebookresearch/ParlAI

Multimodal (Image + Text):
- 4chan https://zenodo.org/record/3606810#.YU-wSLhKiUk
Potential future work

▸ Provide support for Multimodal (Image - text) datasets
  ▹ Adapt previous tools to support image content

▸ Seek options to:
  ▹ Visualize emotions in addition to the sentiment analysis
  ▹ Scalability: Visualize larger number of topics (e.g., 100 topics)
Questions?
Thank You! :)

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