Argviz: Interactive Visualization of Topic Dynamics in Multi-party Conversations

Viet-An Nguyen, Yuening Hu, Jordan Boyd-Graber and Philip Resnik

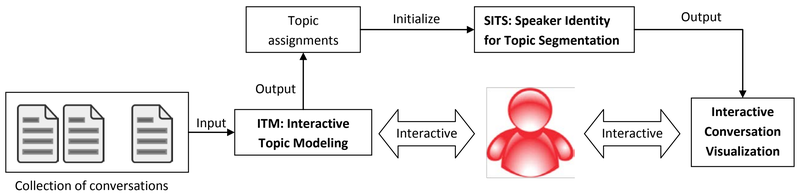
Computational Linguistics and Information Processing (CLIP) Lab, University of Maryland, College Park

Motivations

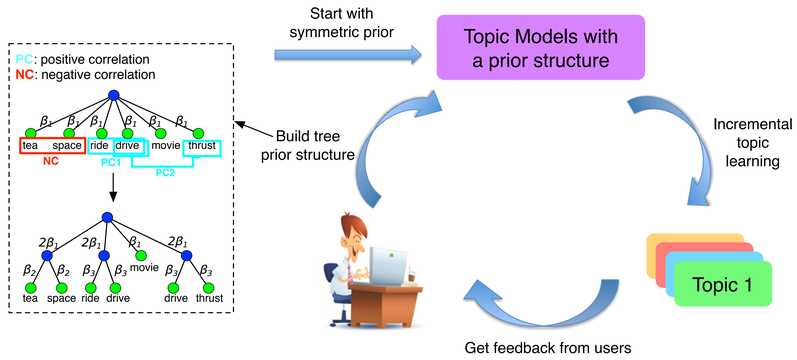
To help human experts uncover the structure of conversations effectively by

1. Allowing users to efficiently inject their insights into model building via *Interactive Topic Modeling* (ITM)
2. Discovering topic shifts in conversations using *Speaker Identity for Topic Segmentation* (SITS)
3. Visualizing interactively the dynamic topic structure of conversations

Argviz: System Overview

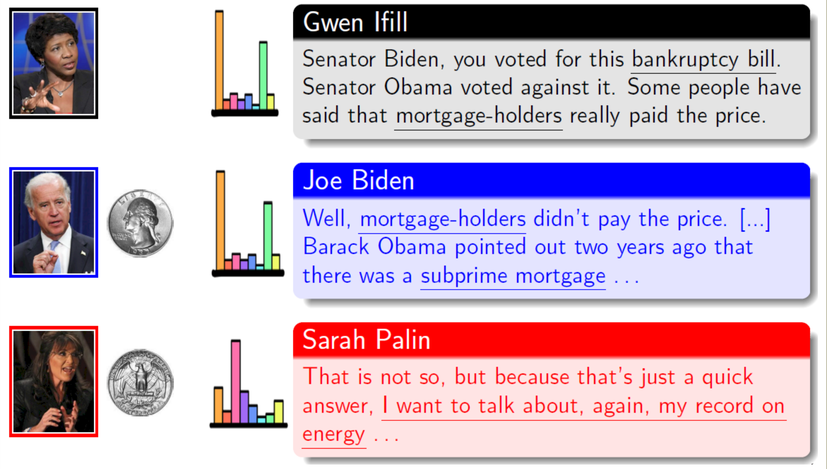


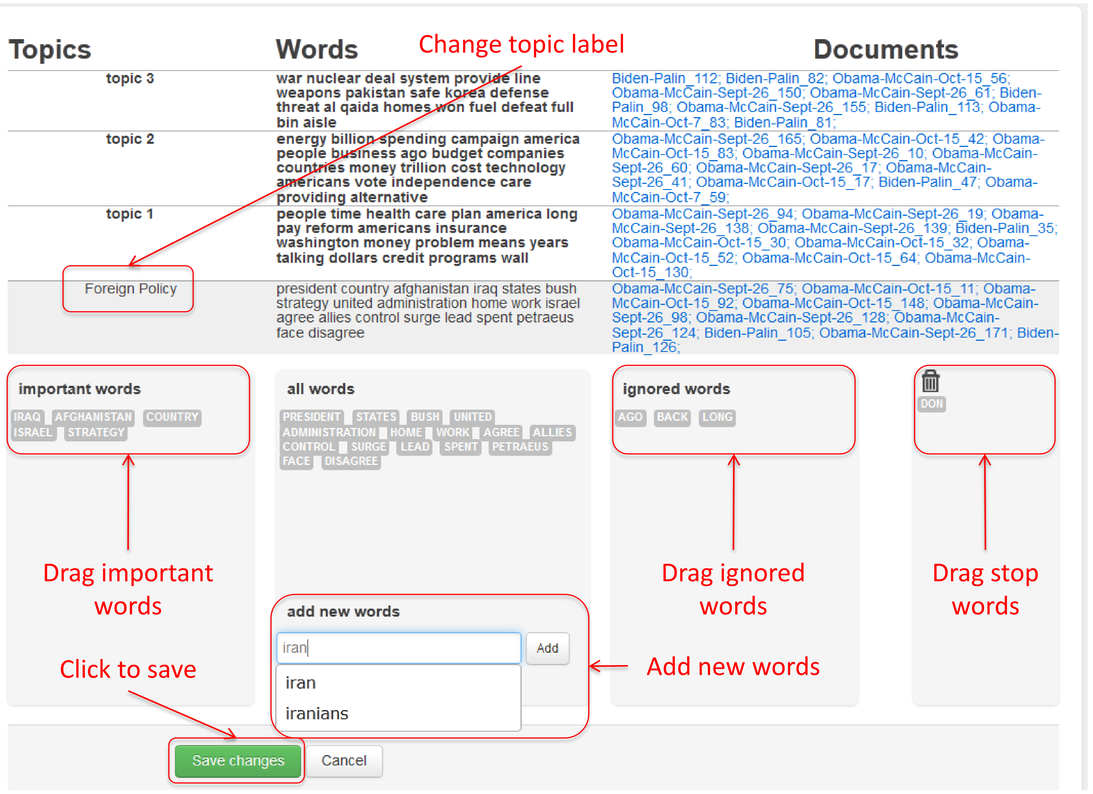
Interactive Topic Modeling

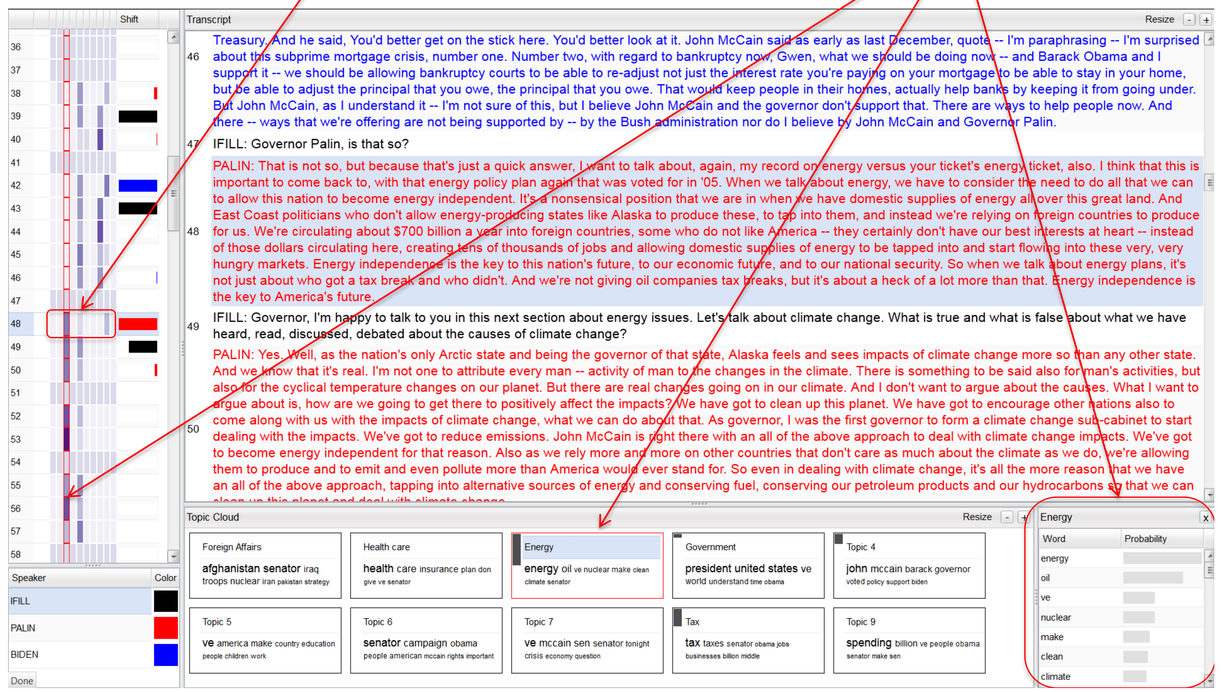


- Encoding users' feedback as correlations (including positive and negative)
- Building correlations into a tree structure as the prior of topic models
- Interactively and iteratively improving the topics

Speaker Identity for Topic Segmentation







Email: {vietan,ynhu}@cs.umd.edu, jbg@umiacs.umd.edu, resnik@umd.edu