

## Activity-Aware Recommender System Exploration using Twitter Data

In everyday life, we keep receiving recommendations from others either by words of mouth, press print, or multi-media such as TV advertising. Nowadays, recommender systems are entering our life online: advertising about something you searched the other day in Google appears in the right side of your current searching page; Amazon always tries to guess what you would be interested in and give some similar items as recommendations; content sites such as StumbleUpon provide information in particular areas which you set before.

This research will serve for recommender systems by focusing on capturing people's activities from tweets to find the associated preference topics. Such recommender system is supposed to provide more targeted information with accompanied comprehensive recommendations. The research priority is to build a categorized database for activity-based preference reference. We use twitter posts that contain "new year's resolution" as our raw data, and extract word pairs as users' activity expressions. Then, by the newly-developed word-pair LDA (wpLDA) model, these activities are clustered under different topics. Fig.1 shows the flow chart of the creation of categorized activity database, and Fig.2 is the conceptual design of wpLDA model.

**Keywords:** Intuitive expressions, Connection lattice, Tweets, LDA model, Association rules

### Reference

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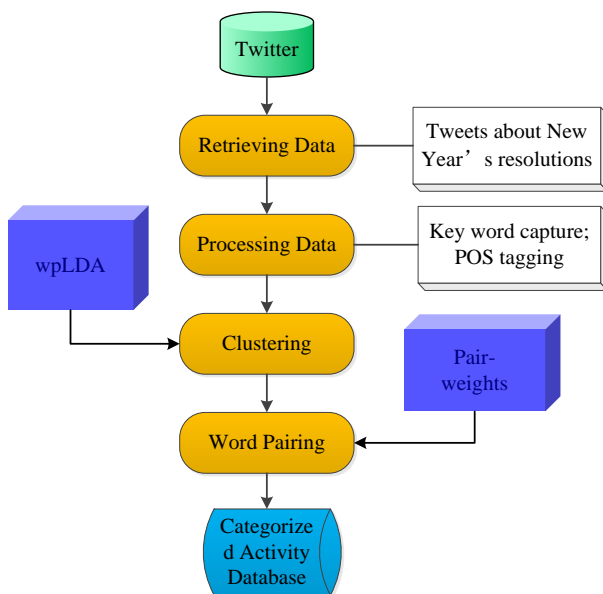


Fig. 1 Flow chart of creating categorized activity database

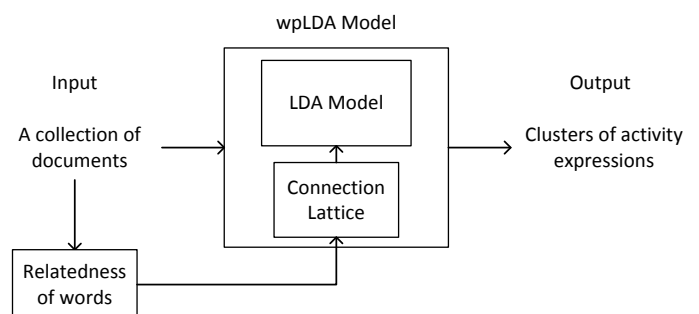


Fig.2 Conceptual Design of wpLDA model