

Following is the proposal to execute CS410 final project.

## Team Details

I would be working as a individual to execute the final project

NetIDs:

- rakeshp2

## Topic Of the Project

This project would try to reproduce the following paper on the topic of Latent aspect rating analysis without aspect keyword supervision

- Hongning Wang, Yue Lu, and ChengXiang Zhai. 2011. Latent aspect rating analysis without aspect keyword supervision. In Proceedings of ACM KDD 2011, pp. 618-626. DOI=10.1145/2020408.2020505

Review comments by customers and users are a valuable source of feedback for businesses. Mining information and quantifying a customer review can help reduce human effort. A generic review usually has the following components:

- topics or aspects such as location, service, cleanliness, specific amenities, food etc
- A relative weight placed on each of the topics. Some topics might carry more weight to a certain customer and hence determines the final rating.

latent aspect rating analysis ( lara ) refers to the task of inferring both opinion ratings on topical aspects ( e.g. , location , service of a hotel ) and the relative weights reviewers have placed on each aspect based on review content and the associated overall ratings

If a system is fed the aspects to look for in a review it would need human intervention and hence defeating the purpose of large scale data mining on review texts. A generative model that identifies the topics and weights associated with each of the topics would make the system function without supervision and hence scale up. Hence this topic of LARA without aspect keyword supervision is valuable and interesting.

## Implementation technology

Python3

Dataset: <http://times.cs.uiuc.edu/~wang296/Data/>

## Project Tasks

- Design
- Implementation
- Testing