



Utilizing Hashtag in Opinion Mining and Sentiment Analysis for Customers Survey



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Motivation

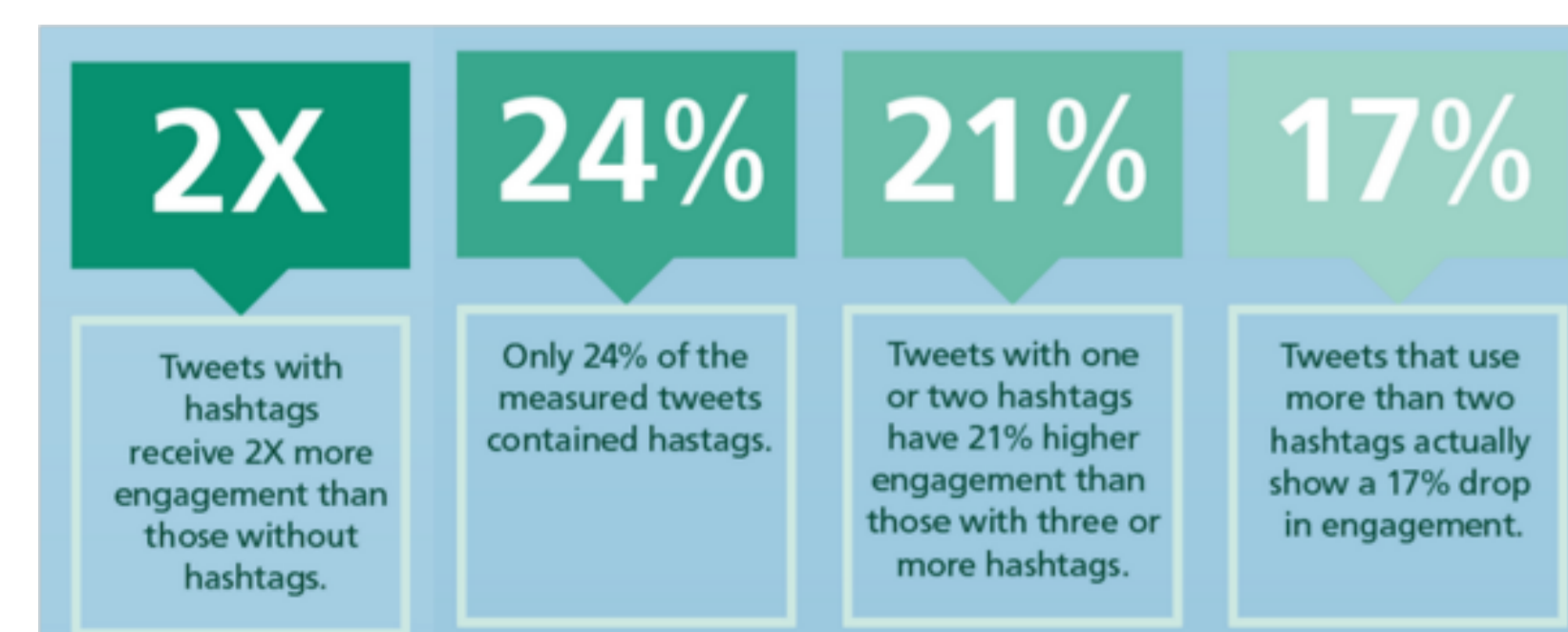


- Customer opinion is useful for all companies
- Customers - typically not interested in traditional surveys/feedbacks
- Can there be a unified opinion collection framework?
- Opinion mining from all social networks - using *hashtags*

Definitions

- **Hashtag** - word or phrase preceded by a pound sign (#) followed by a keyword
- **Go viral** - internet content that spreads rapidly through a population by being frequently shared in social media
- **“like”, “share”, “retweet”** - means of spreading one’s opinion in social media

For Who

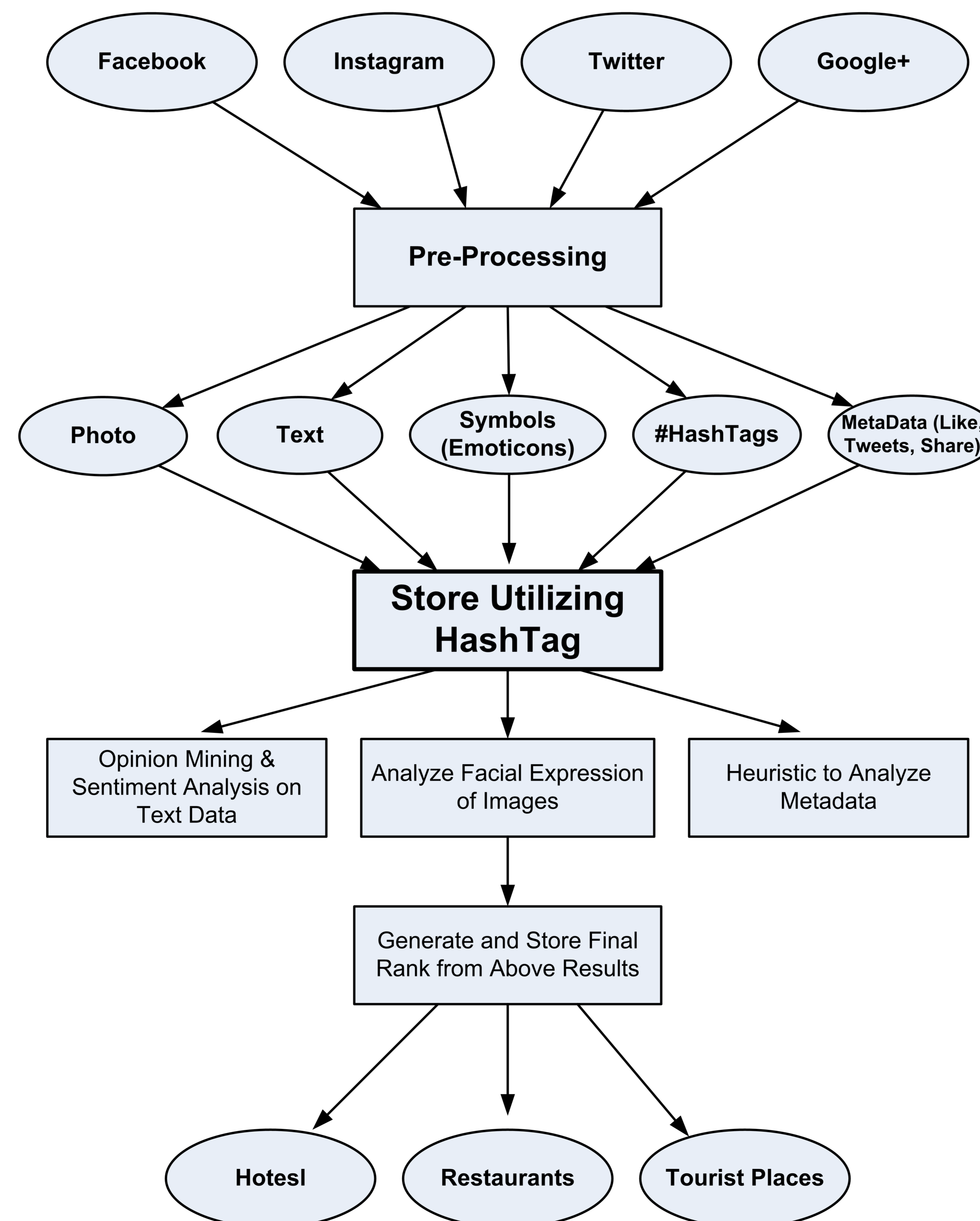


- Customers/stakeholders (hotel, restaurant, tourist place)
- Owners (additional review platform not required, less chance to miss a comment like Facebook post)

Proposed Framework/Architecture

- Fetch data from various sources (Facebook, Instagram, Twitter)
- Categorize them into text, photo, symbols, and hashtag
- Store them in our DB utilizing hashtag
- Apply existing mining techniques by adding weights from additional features (number of likes, tweets, share, comments)

Basic Structure



Examples

#MidAtlanticStudentColloquium

- People can use our predefined syntax like *#CheeseCakeFactory* or *#HotelMarriot*
- Other tags can be fetched as well like *#Restaurant*, *#CheesecakeFactory*

Example: I really liked the *#CheeseCakeFactory*.

- We process the comments (good or bad) then give a rank (e.g. 4/5)
- Store this comments under *CheeseCakeFactory*

Conclusion and Future Works

- We proposed a framework for opinion mining from social medias
- It can be used to replace survey/feedback systems used by companies
- The framework can also be extended and used for recommendation system
- Formulate the problem as matrix completion problem
- The recommendation system will preserve privacy - differential privacy

References

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