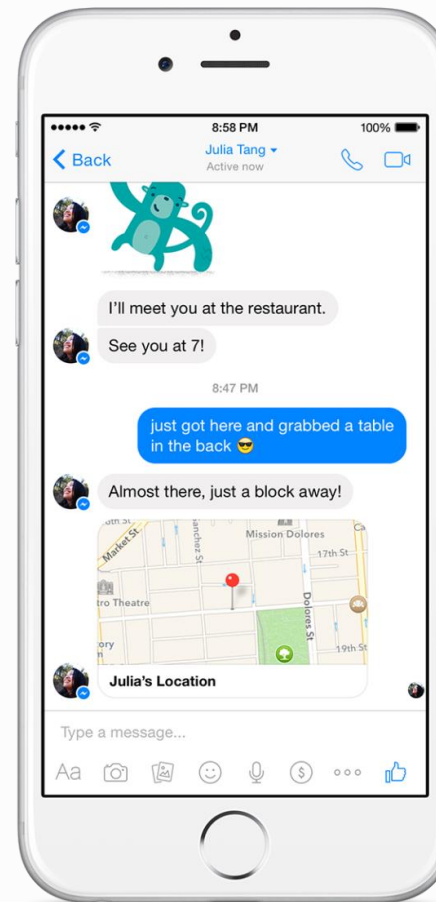

limelight

providing flow to cluttered group instant messaging

Purpose

WHAT DOES IT DO?

An application that will enable the members of an online messaging group to easily focus on topics that interest them. Different subjects will be automatically filtered into separate topics. Group chats with filtered topics will allow for more fluid and engaging conversations.

[LEARN MORE](#)

Design

HOW IS IT MADE?

Using a combination of Stanford's Core NLP functionalities and Wikipedia's API calls, we were able to develop a custom messaging app with the following capabilities:



TOPIC EXTRACTION

Processes every chat message as they are added to define a set of over-arching topics



EMOJI PREDICTION

Analyzes latest messages to determine the potential emojis the user may want to use



AUTO FILTERING

Displays optional filters that user can select to only show the desired subconversations

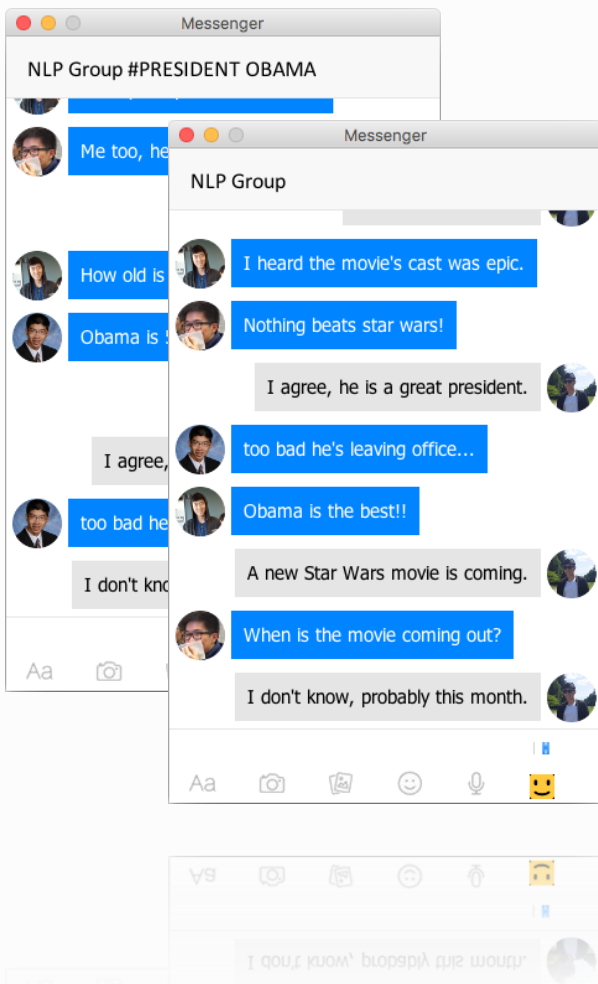
CORE NLP

WIKI API

POS TAGGER

SENTIMENT

TOPIC EXTRACT



PRACTICAL

Concept



INPUT

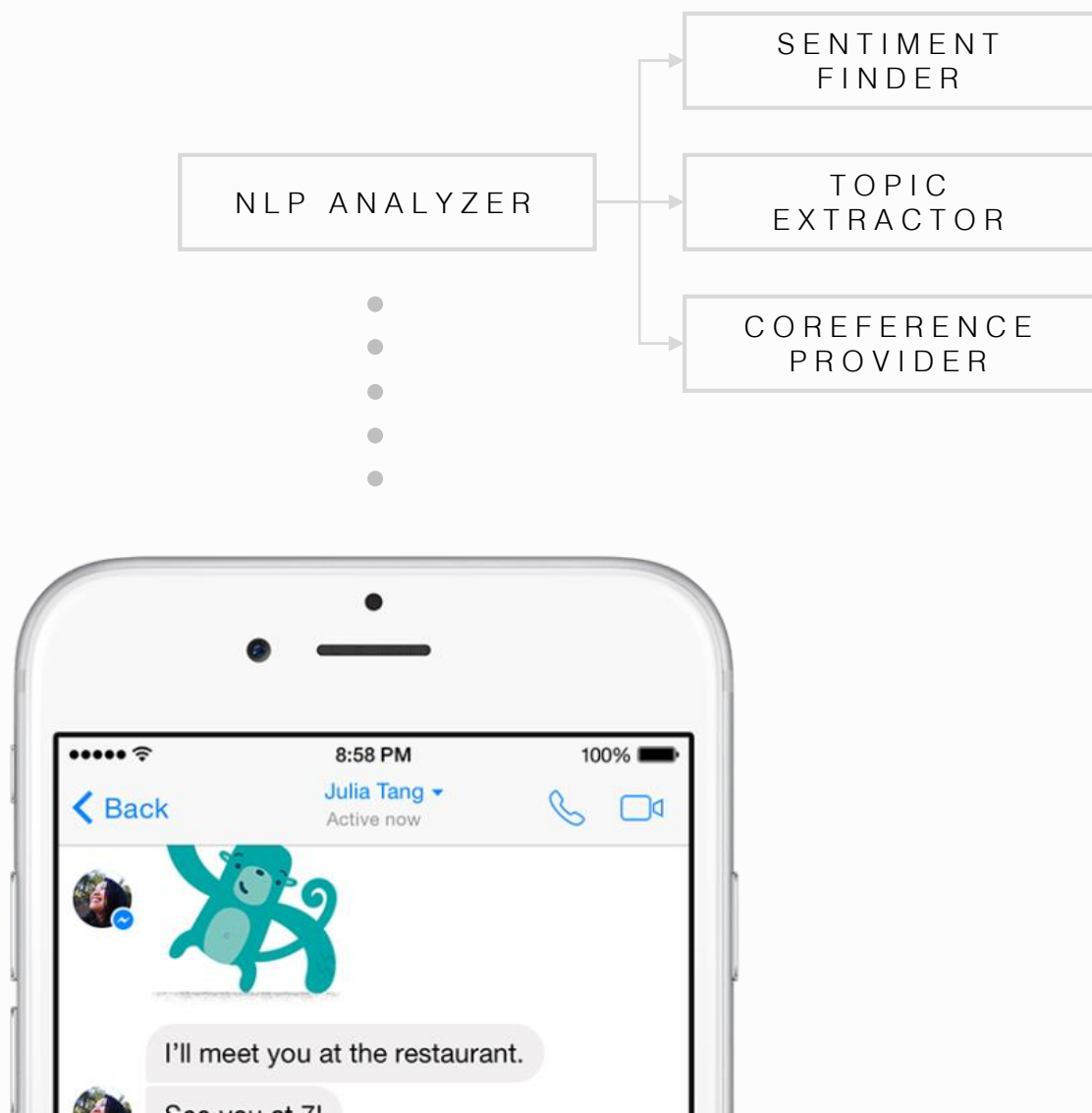
Takes in all messages in current chat thread and determines appropriate filtered topics



OUTPUT

Returns only the respective chats that fit under the selected topic in sequential order

DEMO



Results

HOW ACCURATE IS IT?

We ran our application using custom messages that we created with specific topics in mind. We then measured the percentage of messages that were accurately categorized in their respective topic.





Future

ANY IMPROVEMENTS?

Account for frequency, proximity of user messages, remove stop words, replace pronouns (you, I), utilize machine learning to train models, adjust confidence scores, improve disambiguation

The general accuracy can be improved by taking into account other factors as well, like analyzing proximity of response messages by looking at timestamps, etc.

Inclusion of machine learning could improve accuracy over time as more and more messages of similar topics are passed in.

Thanks!

QUESTIONS?



GITHUB

https://github.com/mbu13/NLP_Final_Project



DOCUMENTATION

https://github.com/mbu13/NLP_Final_Project/blob/master/FinalDocumentation.pdf



RELATED RESEARCH

<http://nlp.stanford.edu/courses/cs224n/2010/reports/rothben.pdf>

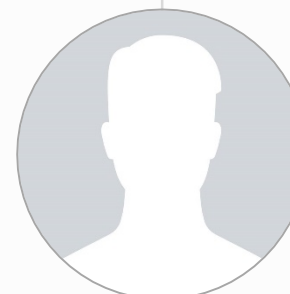
matt bu



alvin leung



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PROJECT TEAM