Twitter Sentiment Analysis on Tourism using Lexicon Based Approach

Name: Vikas Kodag
Roll No.: 3373

Guided By: Prof. M.S. Takalikar

Motivation

- Thoroughly dealt by Alec Go, Richa Bhayani and Lei Huang, Computer Science graduate students of Stanford University.
- Prompt response and more number of user.
- Estimate the changes and additional services required.
- Movies and product reviews.
- Predicting the results of electoral polls.

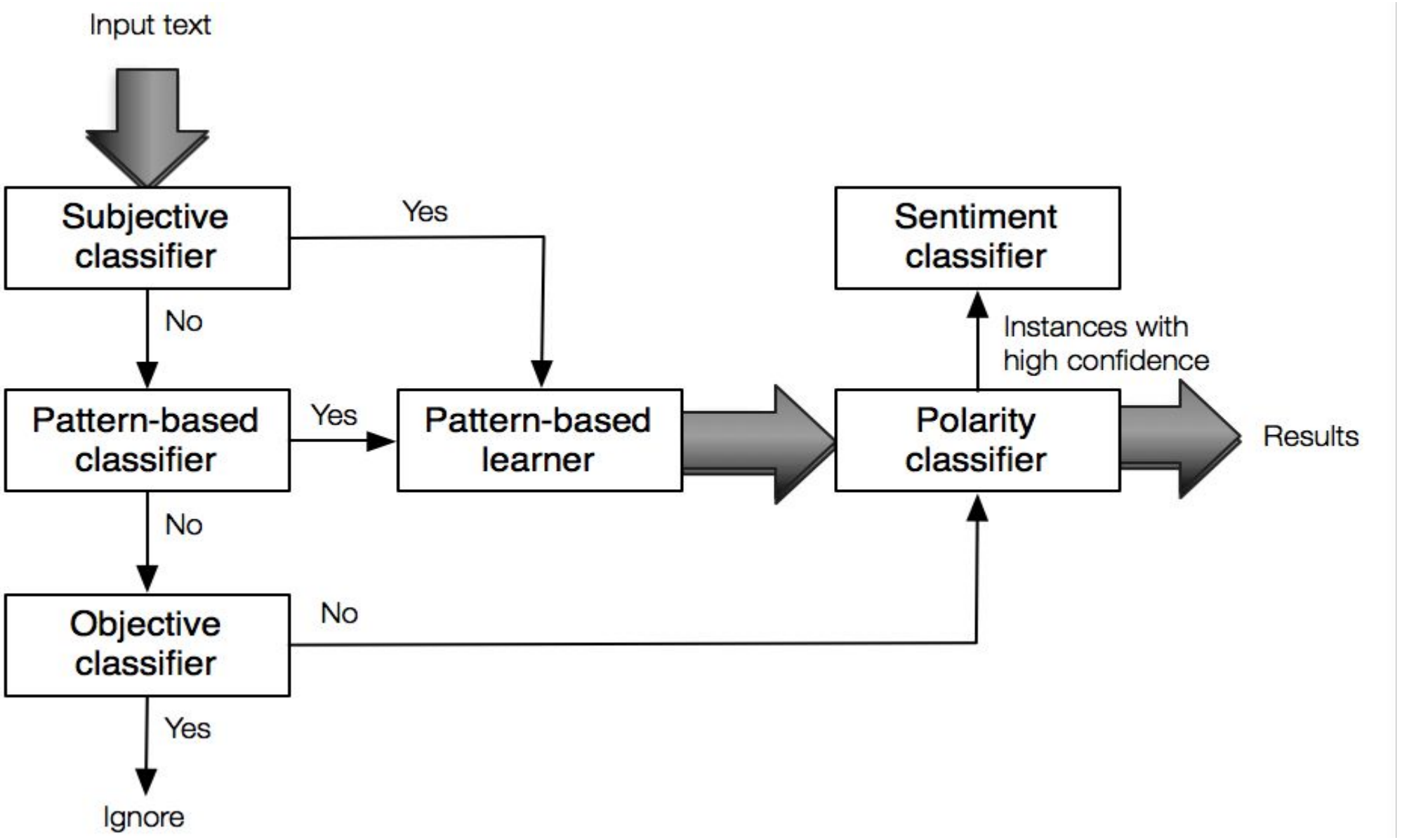
Literature Survey

Sr No.	Paper	Technique Used
1	Marrese-Taylor, E., Velasquez, J. D., & Bravo-Marquez, F. (2013). Opinion Zoom: A Modular Tool to Explore Tourism Opinions on the Web (pp. 261–264). IEEE. doi:10.1109/WI-IAT.2013.193	Lexicon Approach
2	Colhon, M, Badica, C, & Sendre, A (2014). Relating the Opinion Holder and the Review Accuracy in Sentiment Analysis of Tourist Reviews. In Knowledge Science, Engineering and Management (pp.246-257). Springer International Publishing.	Lexicon Approach
3	Himada, K., Inoue, S., & Endo, T (2012, September). On-site likelihood identification of tweets for tourism infonnation analysis. In Advanced Applied lnformatics (11A1AA1), 2012 IIAl International Conference on (pp. 117-122). IEEE.	Support Vector Machine
4	P. Prameswari, I. Surjandari and E. Laoh, "Opinion mining from online reviews in Bali tourist area," *2017 3rd International Conference on Science in Information Technology (ICSITech)*, Bandung, 2017, pp. 226-230. doi: 10.1109/ICSITech.2017.8257115	Recusive Neural Tensor Network

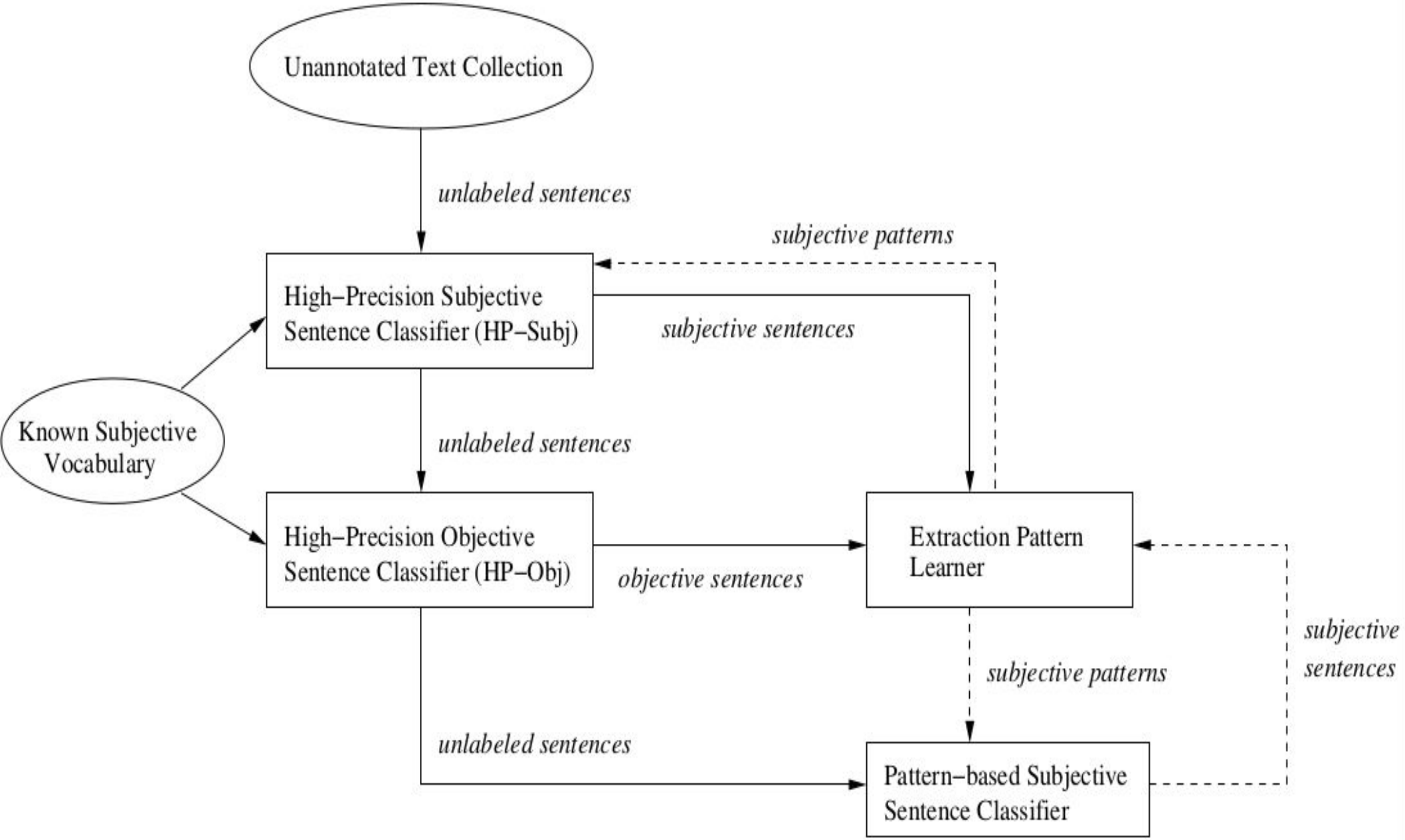
Dataset

- Twitter API (GujaratTourism)
- Collected from period of May 26, 2016 - March 20, 2018
- Tweets gathered - 1000

System Overview



Bootstrapping Process



Results

Positive Sentiments	681
Negative Sentiments	50
Neutral Sentiments	259

	Manual Results	Analysis Result
Positive Sentiments	152	199
Negative Sentiments	202	205
Neutral Sentiments	66	16

```
vikas@vikas-HP-Notebook:~/Seminar/src$ python sentiment.py "Such a beautiful voi
ce to deliver such a timely message as I get ready to top my last 'performance'.
"
[+] Loaded existing UBT tagger!
[+] Loaded existing pattern knowledge!

[*] Checking block of text:
[1] Such a beautiful voice to deliver such a timely message as I get ready to to
p my last 'performance'.
[*] Analyzing subjectivity...
[x] Not found!

[*] Analyzing sentiment...
[x] positive

[*] Overall sentiment analysis:

 Parts:  1
 Sentiments:  ['positive']
 Scores:  [8]
 Results:  {'positive': {'count': 1, 'score': 8, 'nscore': 0.42105263157894735},
            'neutral': {'count': 0, 'score': 0, 'nscore': 0},
            'negative': {'count': 0, 'score': 0, 'nscore': 0}}


 subjective-----> 100.00%
 objective------> 0.00%


 positive-------> 100.00%
 neutral--------> 0.00%
 negative-------> 0.00%

[x] positive (8.00, 0.42)
```

```
vikas@vikas-HP-Notebook:~/Seminar/src$ python sentiment.py "But what a lot of yo
u seem to not understand or simply ignore are that there are bad people out ther
e that don't share your same values for life."
[+] Loaded existing UBT tagger!
[+] Loaded existing pattern knowledge!

[*] Checking block of text:
[1] But what a lot of you seem to not understand or simply ignore are that there
 are bad people out there that don't share your same values for life.
[*] Analyzing subjectivity...
[x] subjective

[*] Analyzing sentiment...
[x] negative

[*] Overall sentiment analysis:

 Parts:  1
 Sentiments:  ['negative']
 Scores:  [-7]
 Results:  {'positive': {'count': 0, 'score': 0, 'nscore': 0},
            'neutral': {'count': 0, 'score': 0, 'nscore': 0},
            'negative': {'count': 1, 'score': -7, 'nscore': -0.2333333333333334
}}

 subjective-----> 100.00%
 objective------> 0.00%

 positive-------> 0.00%
 neutral--------> 0.00%
 negative-------> 100.00%

[x] negative (-7.00, -0.23)
```

Conclusion

- Tweets from “GujaratTourism” were studied.
- Lexicon Based Approach was used.
- High precision subjectivity classifiers were used.
- Overall accuracy : 63%
- Higher accuracy for negative sentiment classification.

Future Scope

- Machine Learning methods
- Sarcasm Detection
- WSD methods (handles word context problem)

References

- Himada, K., Inoue, S., & Endo, T (2012, September). On-site likelihood identification of tweets for tourism infonnation analysis. In Advanced Applied lnformatics (11A1AA1), 2012 IIAl International Conference on (pp. 117-122). IEEE.
- Colhon, M, Badica, C, & Sendre, A (2014). Relating the Opinion Holder and the Review Accuracy in Sentiment Analysis of Tourist Reviews. In Knowledge Science, Engineering and Management (pp.246-257). Springer International Publishing.
- H. Kaur, V. Mangat and Nidhi, "A survey of sentiment analysis techniques," 2017 International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC), Palladam, 2017, pp. 921-925. Doi: 10.1109/I-SMAC.2017.8058315
- https://www.safaribooksonline.com/library/view/natural-language-annotation/9781449332693/ch01.html

Thank You !