SENTIMENT ANALYSES ON SOCIAL MEDIA DATA

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BACKGROUND

Dr. Ku has an ongoing research collaboration with Dr. Jin-A Choi in the School of Communication and Media at Montclair State University. Dr. Choi and Dr. Ku are investigating the efficacy of social media platforms for influencer endorsements. They examined social media users' responses to two influencers' (Markiplier and SSSniperWolf) advertisements by mining their textual comments on three different major social media platforms: Facebook, Twitter, and YouTube.

METHOD

A text-mining software tool known as Orange was used to generate and analyze the sentiments of social media users' comments.

OBJECTIVES

- Learn the Orange Data Mining tool, especially the text-mining component.

- Learn two different sentiment analyses: VADER and Liu-Hu.

- Use Orange to generate the sentiment results from VADER and Liu-Hu methods.

- Summarize and analyze the results.

SENTIMENT ANALYSES EXPLAINED

Vader

o Stands for Valence Aware Dictionary and Sentiment Reasoner. It uses a combination of a sentiment lexicon, a set of grammatical and syntactical rules, and a set of heuristics to determine the sentiment of a piece of text.

o VADER not only gives a positivity and negativity score but also tells us how positive or negative the sentiment is.

Liu-Hu

o Is a Lexicon-Based Sentiment Analysis focusing on the idea of maintaining lists of words that convey either positive or negative sentiments.

o Each word in the list has a polarity indicating whether it is positive, negative, or neutral

Vader and Liu-Hu will be used to get the average sentiment scores for the three social media platforms of the two influencers

Sentiment Scores
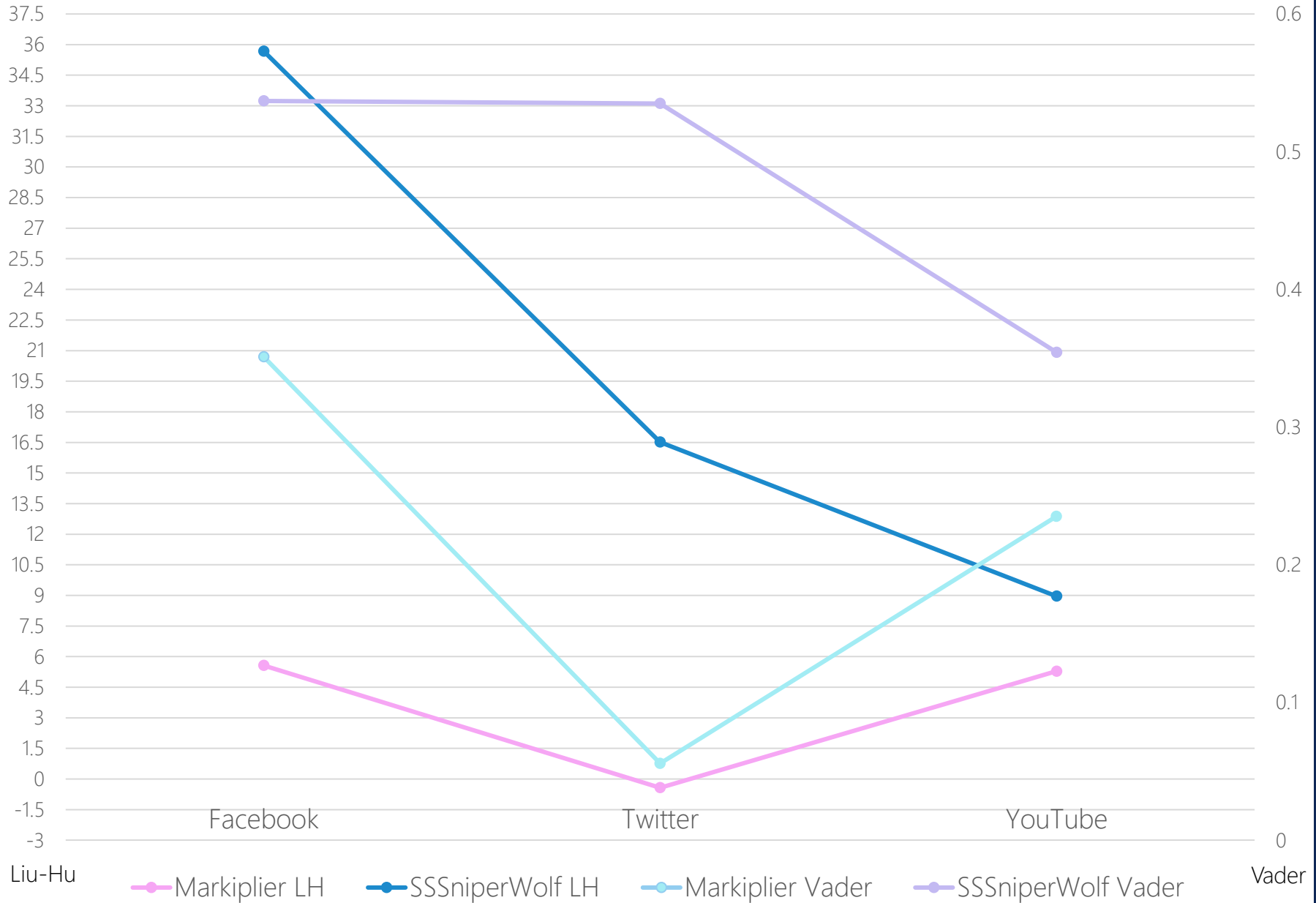
RESULTS

o Markiplier on Facebook has the most positive VADER sentiment, followed by YouTube, and Twitter has the least positivity.

o The same pattern occurred for the Liu-Hu scores for Markiplier where Facebook was the most positive, followed by YouTube, and Twitter is the last (even negative).

o Looking at the VADER and Liu-Hu sentiment scores for SSSniperWolf, the same pattern for all the platforms where Facebook is the most positive, followed by Twitter, and then YouTube is the least positive.

o The graph shows how that the two different ways to calculate the sentiment score and give a consistent pattern of results.

CONCLUSION

o I learned how to do Natural Language Processing using the text mining features in the Orange data and text mining tool.

o Understood and performed two types of sentiment analysis: VADER and Liu-Hu.

o Gained valuable research experience

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