

# Democratic Primary 2020 Sentiment - Early Primary States

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# Research Question

- How well can Twitter predicate candidate favorability compared to traditional polling in early democratic primary states?

# Data Collection

- Sentiment of tweets over 11/23-11/25 time period mentioning candidate's presidential twitter name

i.e. "I would love voting for @ewarren or @BernieSanders this spring" would be a positive sentiment for both these candidates

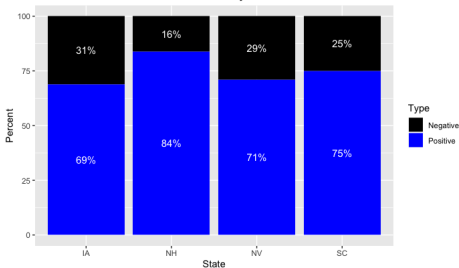
- Most recent CNN "favorability" primary polls for in Iowa, New Hampshire, South Carolina, Nevada

i.e., 10/16 - 10/21 - Monmouth Poll - South Carolina - Favorable:Unfavorable - Joe Biden - 76:12 would be  $\frac{76}{76+12} * 100$  or 88% positive

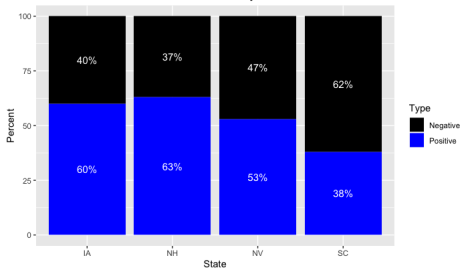
- Will analyze twitter sentiment by looking at the non-stop words in the Harvard dictionary and giving these words a positive or negative sentiment and creating a score from this (Feuerriegel 2019)

# Bernie Sanders and Elizabeth Warren Sentiments

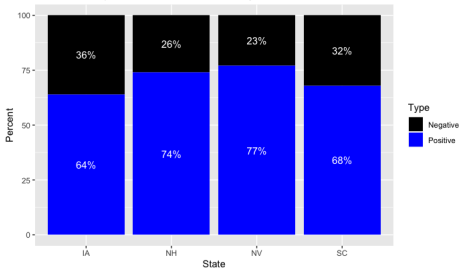
Twitter Sentiments of Bernie Sanders by State



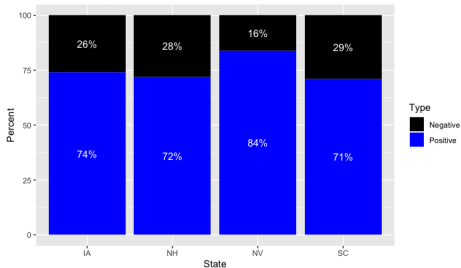
Twitter Sentiments of Elizabeth Warren by State



Poll-Based Opinions of Bernie Sanders by State

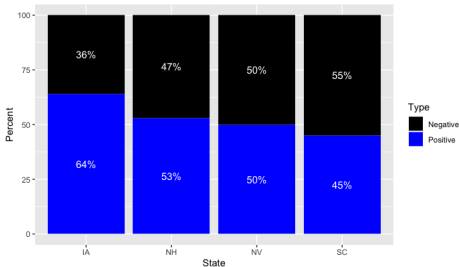


Poll-Based Opinions of Elizabeth Warren by State

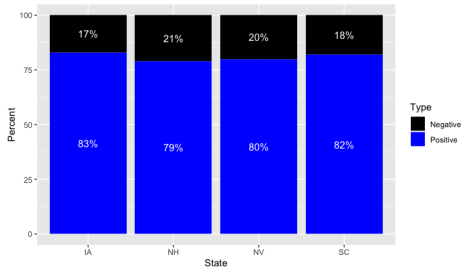


# Joe Biden and Pete Buttigieg

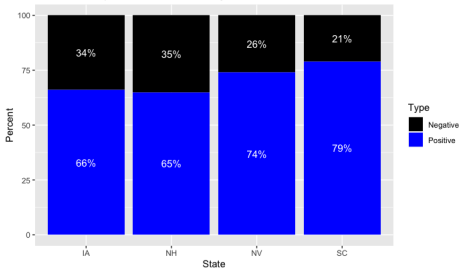
Twitter Sentiments of Joe Biden by State



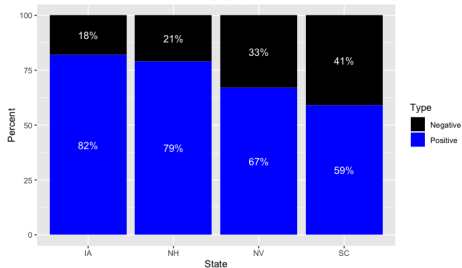
Twitter Sentiments of Pete Buttigieg by State



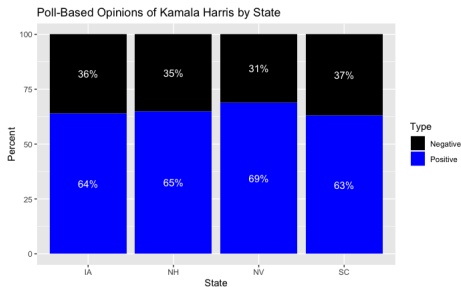
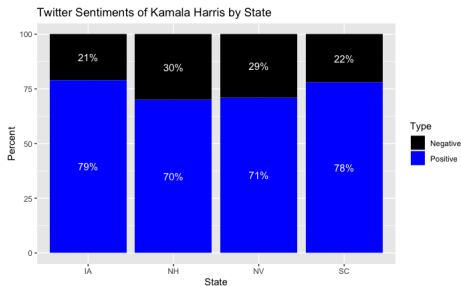
Poll-Based Opinions of Joe Biden by State



Poll-Based Opinions of Pete Buttigieg by State



# Kamala Harris



- Data and polls were observed before Harris dropped
- Keep in mind that Twitter users are a younger demographic than voters

# Conclusion

- Twitter polls were not consistently close to poll predictions for any state or candidate
- Twitter sentiments of Biden and Warren were much lower on Twitter, while Buttigieg was higher
- Interesting during this time period both Biden and Warren fell among polls, along with Buttigieg rising
- Both methods favorability across states stays consistent
- Small amount of data, but seems to help look at favorability trends during that time period, right after the November debates

# References

- Burnap, Pete, et al. "140 characters to victory?: Using Twitter to predict the UK 2015 General Election." *Electoral Studies* 41 (2016): 230-233.
- Cody, Emily M., et al. "Public opinion polling with Twitter." *arXiv preprint arXiv:1608.02024* (2016).
- Feuerriegel, Stefan, et al. "SentimentAnalysis R Package." (2019).
- Saif, Hassan, et al. "Evaluation datasets for Twitter sentiment analysis: a survey and a new dataset, the STS-Gold." (2013).