Social Engagement with Natural Language Processing

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Enabling targeted messaging with machine learning

"**Delta has partnered with the FAA's Office of Communications to address the rise in unruly passengers since the onset of COVID-19. We want you to help us quickly find and assess the most negative tweets, and then craft appropriate responses.**" - *Tim Mapes, SVP & Chief Marketing and Communications Officer, Delta Airlines*

75%

As of August 19th, 2021

Percentage of FAA unruly-passenger reports on planes, that are disputes over mask mandates
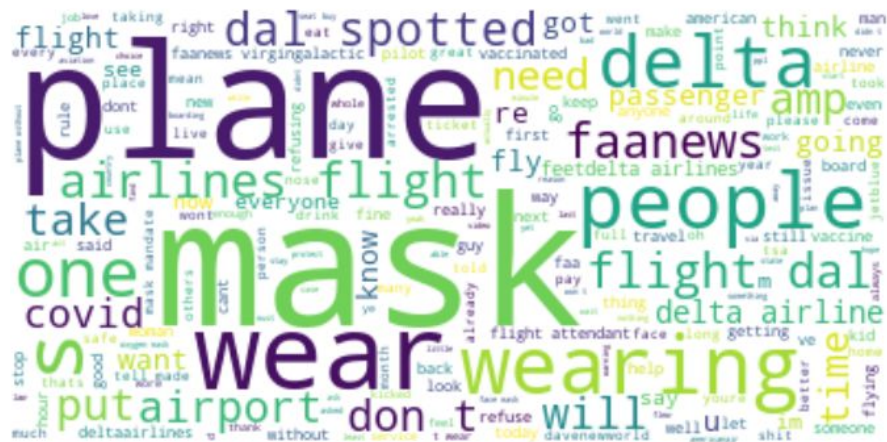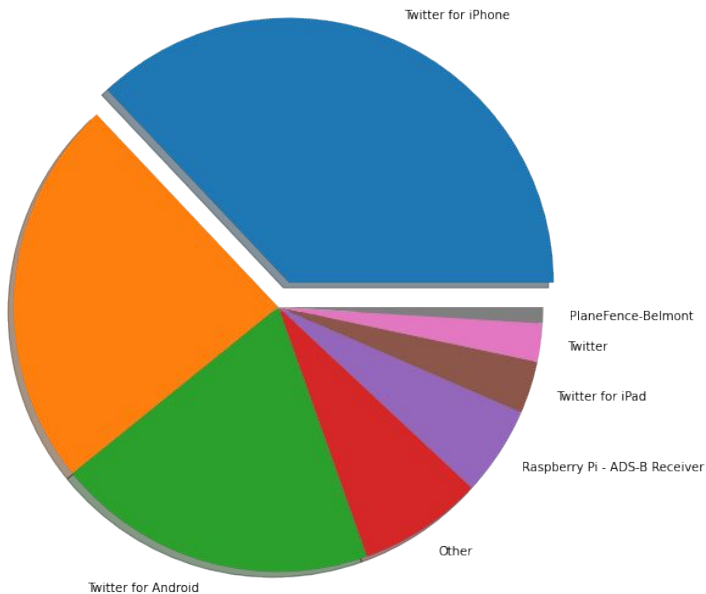
Delta & FAA Initial Pilot Objectives

- Examine key words used in tweets about masks on planes
- Predict tweet sentiment
- Find the most inflammatory tweets - reduce our time to do so
- Prompt responses - enable more accurate and faster engagement to diffuse issues

Visualizations

Sources of Tweets

Recommendations

- Create feedback from Social Media Specialists to Gihu Research to improve key words and effectiveness of targeting tweets
- Measure baseline manual time to identify inflammatory tweets compared to Gihu NLP model
- Record unruly passenger reports on a monthly basis to measure effectiveness of campaign

Next Steps

- Build KNN model to reinforce larger data sets across use cases
- Build Tensorflow tool to auto generate recommended responses and further increase accuracy/reduce manual time
- Delta: expand to other critical use cases
- FAA: expand NLP to other airlines

Thank You, Let's Make the Skies Safer

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Find on Github at
https://github.com/pleasecallmejax/Mask-Mandate-Sentiment-Analysis-Using-NLP