Traveling the Twitterverse

Machine learning tools to unlock social media insights for Apple product launches

Team Intros and Agenda

Meet the Team

Christopher Swecker
Data Scientist

Albert Chen
Data Scientist

Diego Fernandez
Data Scientist

Ryan Moore
Data Scientist
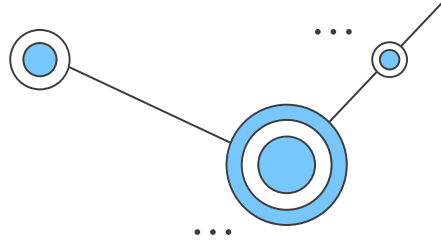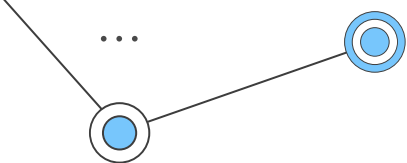
High-Level Agenda

Business Problem

Data Overview

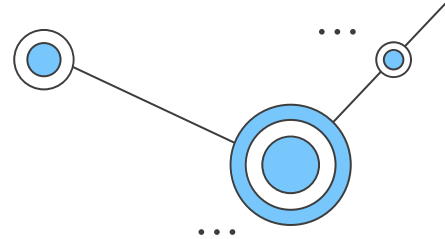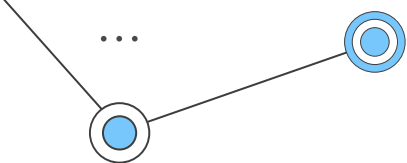Modeling & Results

Next Steps

Apple's Bottom Line

Manual sentiment analysis: 80 hours
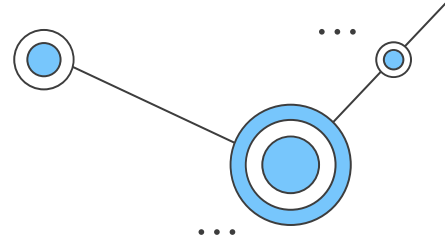
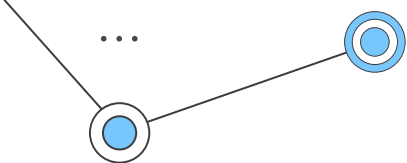**Automatic sentiment analysis: 1 minute**

Business Problem

Business Problem

- Problem: Analytical inefficiency of social media sentiment analysis

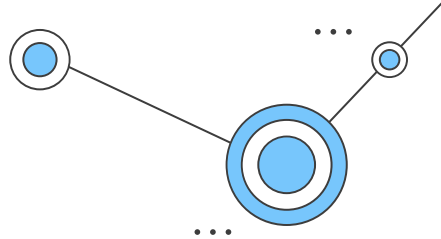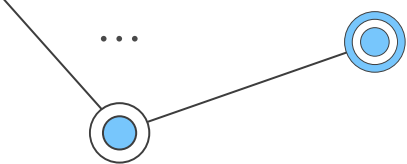- Solution: Automate sentiment analysis

Background

- SXSW 2010 was a marquee moment in the history of iPad product launches

- Substantial social media buzz around last minute pop up store for iPad 2
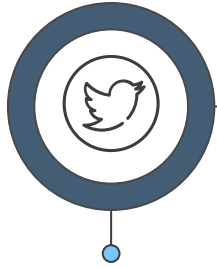
- Tipping point for Twitter popularity
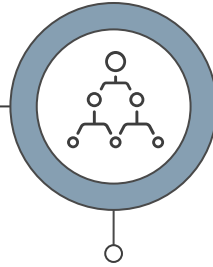
SXSW

Data Overview

Data Process Overview

Scope

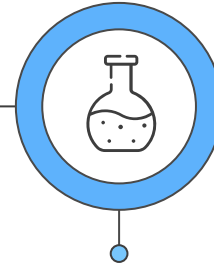2010 South by Southwest Festival Twitter data

Manually populated sentiment tags

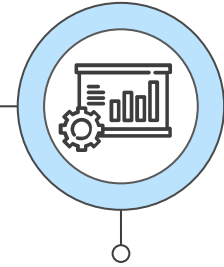## Filtering

Parsed data for tweets w/ Apple terminology

Applied custom text cleaning algorithms

Engineering

Engineered new analysis features, including:

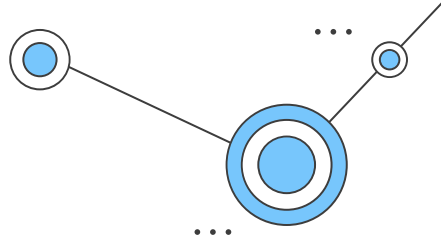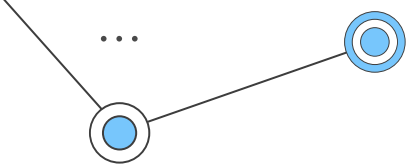- Emphasis
- Mentions
- Word sentiment scores

Modeling

Modeled and tuned ML algorithms for auto-prediction

- 65% accuracy on new data

Modeling & Results

Modeling with 65%Accuracy

Processing
Custom methods clean text and use each word as input

Predicting
Model takes all inputs and determines the sentiment

" nice line outside apple store guess people want ipad2s "

Positive Sentiment!

Input
Twitter data is placed into the model

" *Nice line outside #sxsw #apple store! I guess people want some iPad2s!!!* "

Scoring
Sentiment scores are generated and used as additional inputs

+ Emphasis Score: 5
+ Positive Sentiment Score: 37%

Customer Facing Visualization

Negative Sentiment

Neutral Sentiment

Positive Sentiment
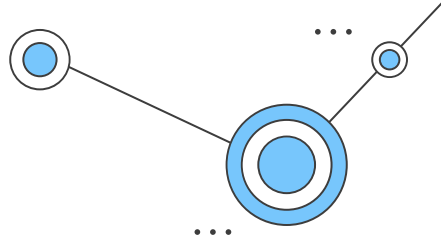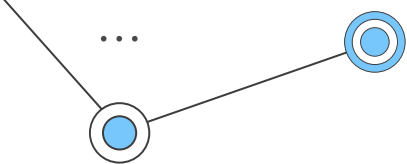
Recommendations

Recommendations

Adoption of automatic sentiment analysis could have profound impacts on marketing strategy

Leak Monitoring

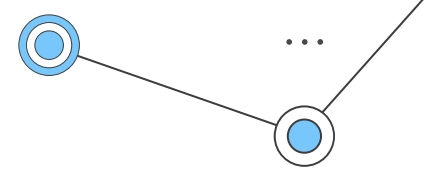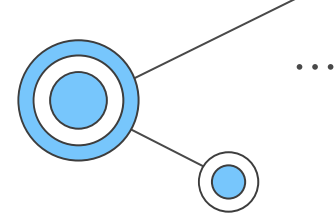*Turn a leak into an opportunity to test the water on coming features*

Increased Marketing Productivity

Easy-to-use, user-friendly model can see widespread adoption

Competitive Edge

Model can be applied to competitors for comparables

Next Steps

Next Steps

Before / after analysis of product launches

Live linking and visualization

BERT and Neural Net Modeling

Thank you!

Questions?

Ryan Moore
github.com/mooreaz92

Diego Fernandez
github.com/dmf1998

Albert Chen
github.com/albertcchen

Jake Swecker
github.com/jswec