



Seattle vs Portland

Themes and suggestions for
reddit advertising in the PNW

By Laura Minter

Background

Audience: Companies looking to market their product on reddit to users in the PNW

Problem: Identify both common & disparate themes for the Seattle and Portland redditors based on submissions. Provide suggestions for marketing in each city as well as across the PNW.

Data source and features

Reddit: r/Portland, r/Seattle, r/SeattleWA*

- 120k from Seattle (half from each)
- 150k from Portland
- Acquired via Pushshift Reddit API

Standard Features

- Title
- Selftext
- Author

* Competing subreddits in same market, roughly same size

Data source and features

Reddit: r/Portland, r/Seattle, r/SeattleWA*

- 120k from Seattle (half from each)
- 150k from Portland
- Acquired via Pushshift Reddit API
- 270k posts
- 84k individual authors
- Null model: 55% accuracy

Standard Features

- Title
- Selftext
- Author

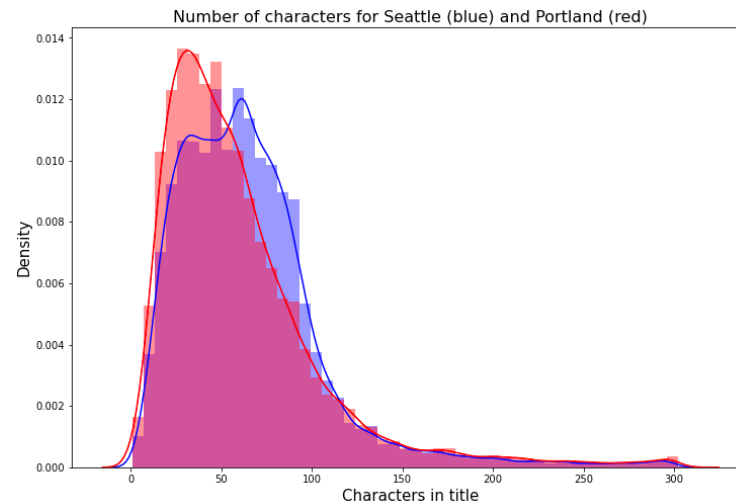
Engineered features

- Full text (title + selftext)
- Vectorized text (3k)
- Length of text
- Sentiment

* Competing subreddits in same market, roughly same size

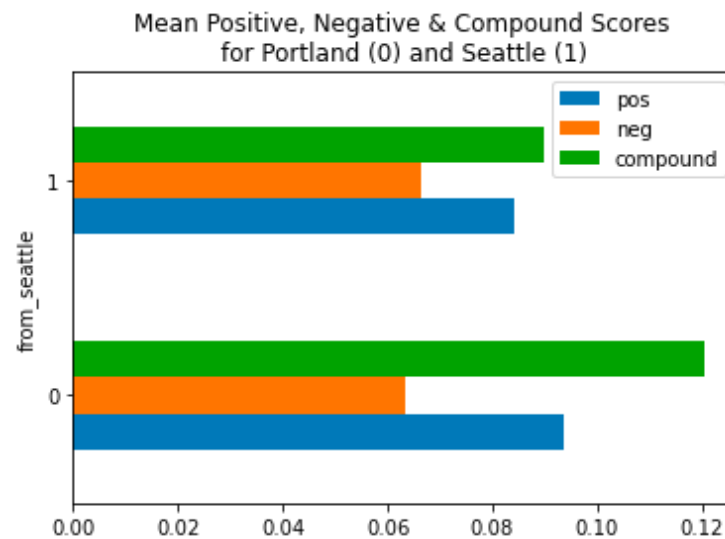
Exploring the data

- Length of text
 - Characters, words
 - Title, full text
- Sentiment analysis
 - VADER



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The Model

Null model accuracy 55%

TFIDF Vectorizer

- excluded stop words

Logistic Regression

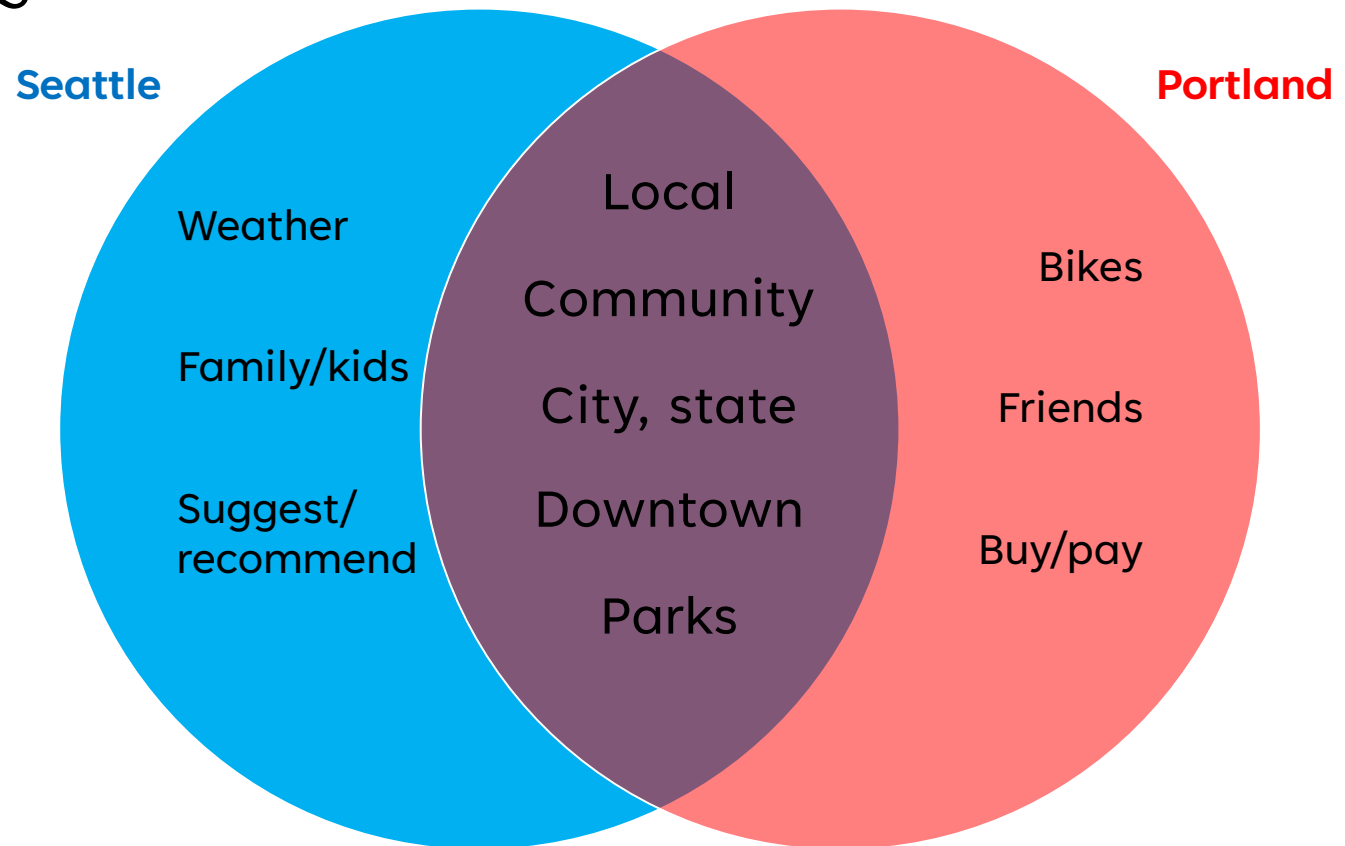
- Max iterations = 10,000
- C = 1.0
- Penalty = l2

Accuracy 82%

- 83% on train data, 82% on test data
- Precision 86%
- Recall 72%

Look at words with high/low coefficients

Findings



Suggestions and Recommendations

- Reddit has an active PNW community, providing a good advertising opportunity
- Focus on **community** and **local events**
 - Seattle: weather and family
 - Portland: bikes and friends
- Next: investigate effect of time
 - Seasonal variation
 - Multiyear trends

