Powering Predictions

with Customer Voice

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Problem

Context   Metric predictions - leverage customer voice

Opportunity Tasty varied bites of language data on table

Question   Predict sentiment w/ customer text data?

Use cases   Predict customer metrics w/ (un)labelled text

Project

Data	Yelp/Google restaurant customer reviews
Task	Classify sentiment classes using text data
Operations	Data sourcing, database, process/test pipes
Algorithms	Comparing model + parameter accuracy

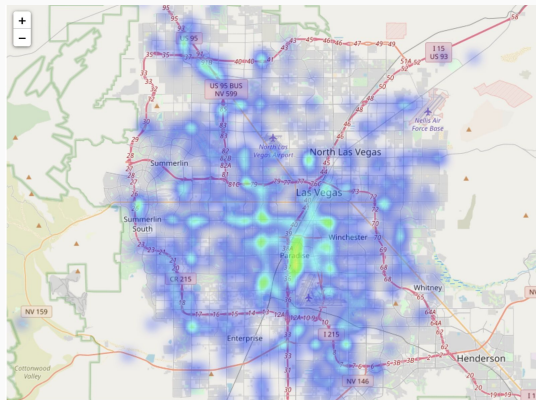# Understanding the Data

YELP Open Data Set

10 metropolitan areas   6,685,900 reviews   192,609 businesses

Example of Prediction

I love the idea behind this place. Plant-based food in a fast food style. I didn't feel the implementation worked so well. Lots of the dishes have cilantro pesto in for taste. If, like me, you have a genetic disposition to cilantro testing like soap, you can ask for it not to be included, but what's left isn't that tasty. My BLTA had very thin slices of avocado and overdone 'bacon', so the taste was pretty minimal.

Predict!

{"Our prediction":"Bad"}

Insights

Sentiments	Define sentiment classes
Big data	Data size barriers
Representation	Words, sequences, phrases, context
Algorithms	Basic algorithm win & decent performance

Roadmap

Algorithms   Ensemble models under tuned parameters

Cust Clustering Location, language, expertise

Topic Models   Unsupervised learning of topic models

Infrastructure   Computational power & full pipeline

Thank you!