



# Text Summarization

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# Analysing Text Reviews



## Business Problem:

Companies have huge repositories of customer reviews/chats. These reviews are an important source of feedback to companies. Marketing departments can use these reviews to create competitive advantages for companies. However there are few challenges:

- ✓ Collect those reviews
- ✓ Convert reviews into structured text
- ✓ Process it to derive meaningful insights

A few companies outsource these activities which leads to additional costs



## How teX.ai solves this problem?

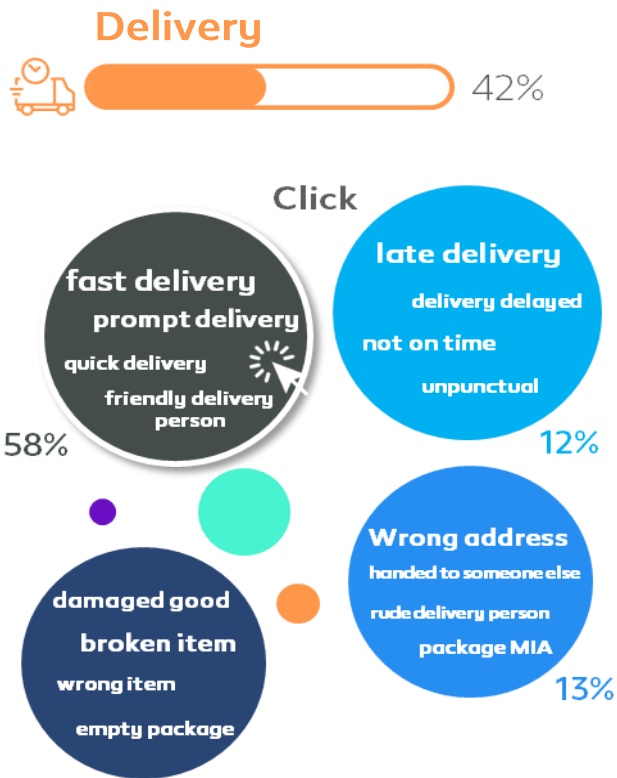
teX.ai summarization module uses NLP to:

- ✓ Convert unstructured text into structured format
- ✓ Identify topics and local sentiment
- ✓ Derive actionable insights
- ✓ Models used – Topic Clustering, Sentiment Analysis, Key-phrase extraction



## Results with teX.ai

- ✓ **30%-40%** improvement in processing time
- ✓ **20%-30%** increase in customer satisfaction





## Client Overview

- A market research knowledge product company based out of the USA



## Business Challenge

- 120mn+ documents scraped and stored in a Postgres database. The documents were of different types - research papers, market research documents, blogs etc.,
- The vision for the product was to present only relevant documents to the users according to their interest
- The target audience was the key executives who had time enough to read only summaries



## Implementation Approach

- Reading the whole documents would have taken a lot of executive's time
- Reading one document might not have given them the complete picture of the market or the search topic as one document might focus only on one subject
- There was a need for a method which could extract brief summaries, key topics, entities and quality of publishers etc.,
- Topic Modeling on retrieved documents from Elasticsearch using Latent Dirichlet Allocation algorithm. Topic models presented as network charts using D3.js
- Named Entity Recognition using SNER and SpaCy
- Publisher-publisher similarity using word2vec, TF-IDF & Cosine Similarity



## Technology

- LDA, Word2Vec, Cosine Similarity (Hetzner machines, Flask, Docker, SpaCy)



## Business Impact

- Understand high level topics in minimal time
- Publisher recommendations and quality check
- Develop high level understanding of several topics and find trending topics

# THANK YOU



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