



## Leveraging Customer Insights for a Global Sporting Goods Retailer using teX.ai

- Customer grievances addressal time reduced by 80%
- Improved NPS by 50%



## Customer Background

The customer is a multinational sporting goods retailer with outlets across the globe. Their emphasis on sports products and the general sporting community around their locations enabled them to invest in new innovations and technologies to provide extraordinary customer service to their global customer base.



### Business

Text Analytics



### Domain

Retail



### Tools

**Packages** – SpaCy, TensorFlow, Keras, Scikit-Learn, NLTK, Pandas, Numpy

**Product Stack** – Elasticsearch, MongoDB, Angular JS

**Algorithms** – ELMO, BERT, Latent Dirichlet Allocation, Non-Negative Matrix Factorization, TF-IDF



### Key Highlights

- 80% reduction in time for store managers to take actions on customer grievances
- 50% improvement in customer satisfaction levels

# Business Requirement •



With access to large volumes of customer reviews, the client looked towards teX.ai to help analyze this huge unstructured data volume and obtain valuable insights which can then be used to improve customer experience.

- Create an extraction pipeline to extract reviews from various review sources.
- Perform text analytics to classify and summarize the reviews.
- Generate user-specific analysis and results based on business objectives.
- Develop a product layer with tabs for different stakeholders to consume the results.



## Solution Overview

teX.ai successfully performed Voice of Customer Insights on customer reviews. The system involved generating a data pipeline to aggregate all the customer reviews in a single location, post which analytics models can be deployed on it to classify and categorize the data as per predefined rules. An application was also developed to consume the results of these models by the various stakeholders. Interactive dashboards, root cause analysis capabilities, push notifications, etc. were implemented for maximum business value.

# Approach & Implementation •



teX.ai's text extraction and classification modules were used to develop the solution



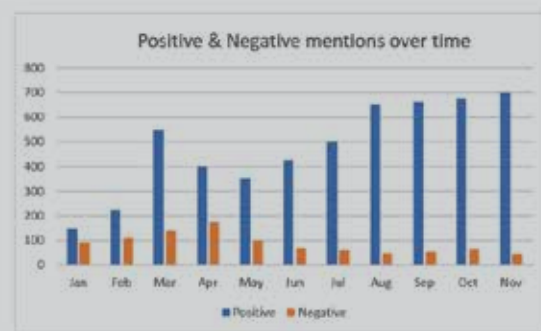
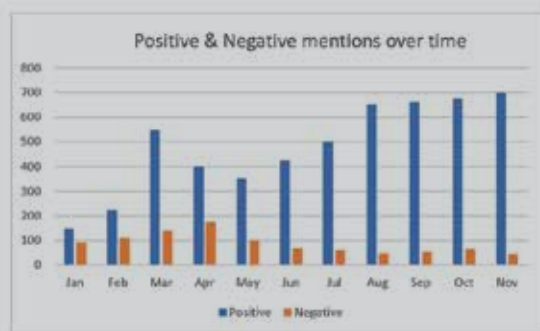
## Text Analytics Engine:

- Created an extraction pipeline to extract reviews data from review sources like,
  - Trustpilot
  - Mopinion
  - Yext
  - OpenVoice
- Created a CDC (Change Data Capture) logic to extract only the reviews which are not already extracted, using Python. Set up automatic refresh at a fixed frequency.
- Stored the extracted data to Elasticsearch for efficient storage & retrieval.
- Important positive and negative key phrases were grouped by keywords in a cluster. These keywords were automatically extracted from the corpus of text.
- Separate keywords/ attributes are identified for each category and important key phrases extracted for them.
- Split of positive and negative responses for each attribute across categories.
- Identified the top 3 negative categories/ keywords (having maximum negative key phrases associated with them) and sent as push notifications.
- Enabled semantic search to search for specific keywords in the reviews.
- Reviews clustered/ classified in pre-defined categories for faster analysis.

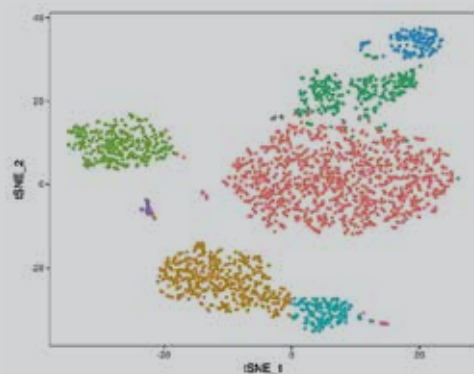
## Review Topic Clustering



## Positive and Negative Key phrases over time



## Review Clustering



## Segmented Insights





## Application Layer:

- Identified latent topics and keywords associated with them, with the option to click on the keywords to navigate to the specific review containing those keywords.
- Search functionality created to allow store managers to look at relevant positive and negative keyword with green and red highlights, for immediate action.
- Roles and permissions were set accordingly to the hierarchy of the stakeholders and location of the stores.
- Review count across positive and negative were aggregated over the months segregated by Product, Store, etc. for deeper analysis.
- List of stores, categories generating higher negative reviews were sent as push notification.
- Managers would have access to relevant stores and category level results with drilldowns for root cause analysis.

## Business Impact



By performing Voice of Customer Insights on the review corpus, in-depth insights were available that dramatically improved the quality and speed of business decisions.



80% reduction in time for store managers to take actions on customer grievances, owing to timely push notifications.



Over 50% improvement in NPS (Net Promoter Score) owing to faster grievance redressal and staff response.



The data storage and retrieval were enhanced by implementing Elasticsearch.



Application was modularized and deployed as a SaaS model.

**Get in touch to see how**  
**teX.ai can help you!**



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