

Unit 12.1 | Capstone Project 2: Project Proposal

Customer Feedback Prediction

Problem Statement/Description:

The primary goal of any company is to solve customer problems and fulfill their needs. Improving customer satisfaction through review of feedbacks is critical to the success of client business. The focus of this project is to analyze customer reviews and feedbacks of various Amazon Alexa products, and find opportunities for improvement in products and services. The objective is to discover insights and perform sentiment analysis on the data.

Dataset - Amazon Alexa Review

Data Source: <https://www.kaggle.com/sid321axn/amazon-alexa-reviews>

Business Case:

Client collects lots of feedback, however needs continuous monitoring of feedback to understand customer sentiments. The focus is to perform feedback analysis to get actionable data insights. For Client who receives thousands of comments per month reading them isn't an option.

The key problem in feedback analysis is that people may describe the same thing in many different ways due to synonyms, paraphrases, misspellings, grammatical variations and even autocomplete errors. We will perform predictive analysis that will enable us to understand positive and negative feedback trends. Features of negative predictions can be used as a feedback loop to provide information to the concerned department within Client Organization for continuous improvement of products and services. Example, if a negative feedback is predicted due to feature "poor packaging", then the feedback loop should input this information to the logistic department to address the product packaging issue. Cross-functional Product development team can use features of positive feedback prediction in design of new products and services.

This project will go through several phases – data cleaning, data analysis, data visualization and application of machine learning algorithm to generate a prediction model. In the final step, model evaluation will be performed followed by efforts to improve model performance.

Business Value/Financial implications:

Customer Feedback analysis is an important business metrics that drives various KPI's. The success of this project will be determined by the outcome of the project i.e. prediction model. Effective model developed by this project can bring following business values to the Client.

- Business growth, achieve high ROI
 - By analyzing feedback and in turn, addressing customer concerns, Client can increase upselling and cross-selling success rates by 15% to 20%.

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- This means improved customer retention, less churn, and a higher customer lifetime value, plus less costs to retain buyers. It can help Client achieve positive net promoters score or customer satisfaction score.
- Identify business strengths and weaknesses
- Enhance customer service through market research
- Identify opportunities to improve products and services.
- Explore Customer Motivations through sentiment analysis.
- Incorporate feedback loop into Client's Organization.
- Spot and react to trends in real time.

Project Deliverables:

The focus of this project is to get actionable insights from customer data, including customer feedback. Perform feedback analysis and create an algorithm that predicts customer feedback. Code, Slide deck and project report will be the project deliverables.