EXPLORING THE POWER OF SENTIMENT ANALYSIS: Transforming Amazon Reviews to Improve Customer Satisfaction and Make Informed Decisions

Overview

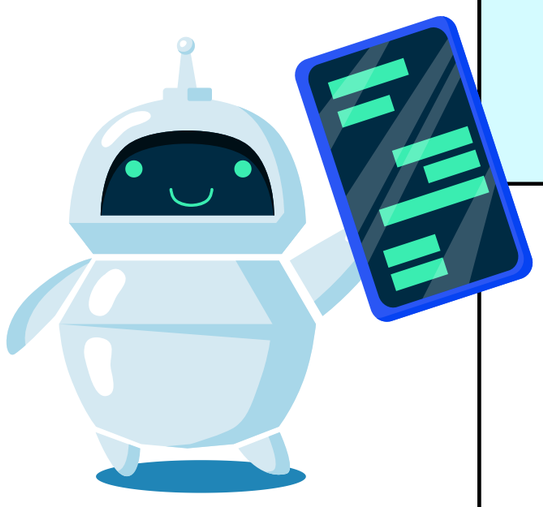
- Machine learning project
- Sentimental analysis based on customer reviews
- Classification model
- Goal: Determine sentiment as positive, negative, or neutral.

Problem Statement

In the realm of Amazon's e-commerce platform, managing the influx of product reviews poses a challenge. This project aims to develop a sentiment analysis model tailored for Amazon reviews. Its goal is to accurately classify sentiments as positive, negative, or neutral, empowering sellers with actionable insights. Challenges include diverse product categories and varying review lengths. Success will enable informed decision-making and enhanced customer satisfaction.

Methdology

We will generate our own dataset by applying the technique of web scraping on Amazon. For that purpose we will use Selenium. For text classification, we will take the help of TextBlob or any suitable platform.



Dataset Features

- P_name :Product Name (Type:String)
- P_des : Product Description (Type:String)
- P_price : Product Price (Type:Int)
- P_availability : Product Instock / Outstock (Type:String)

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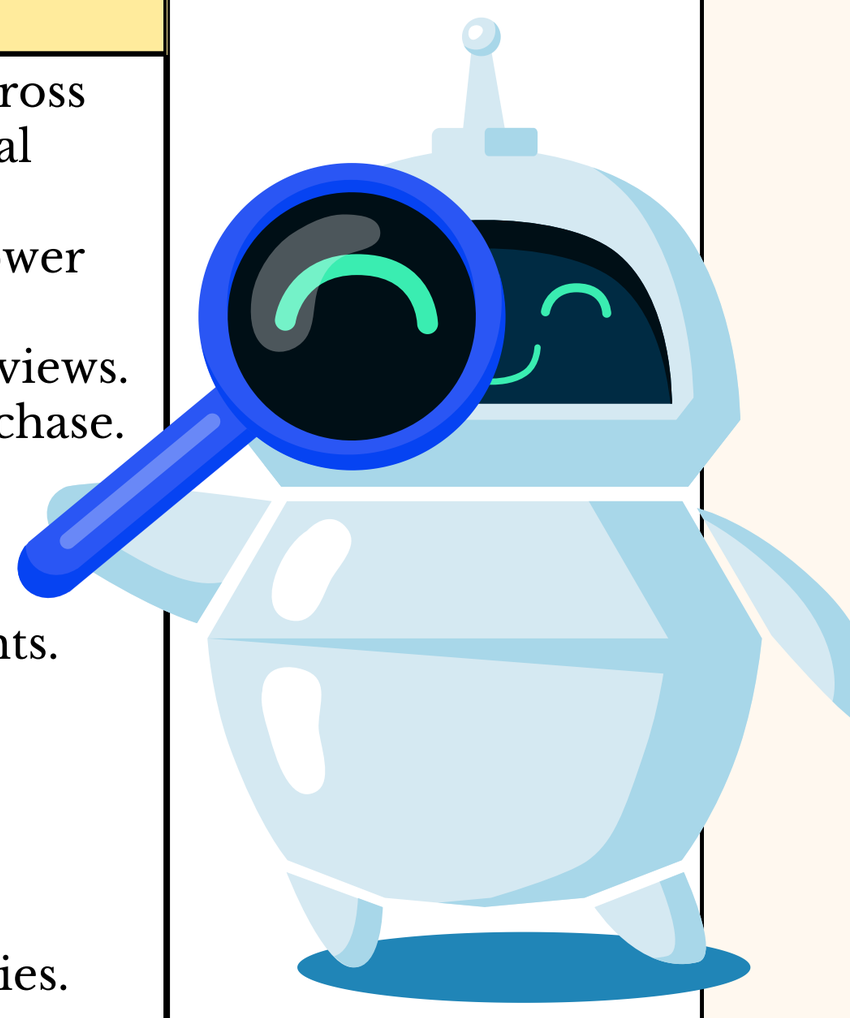
Dataset Features Cont.

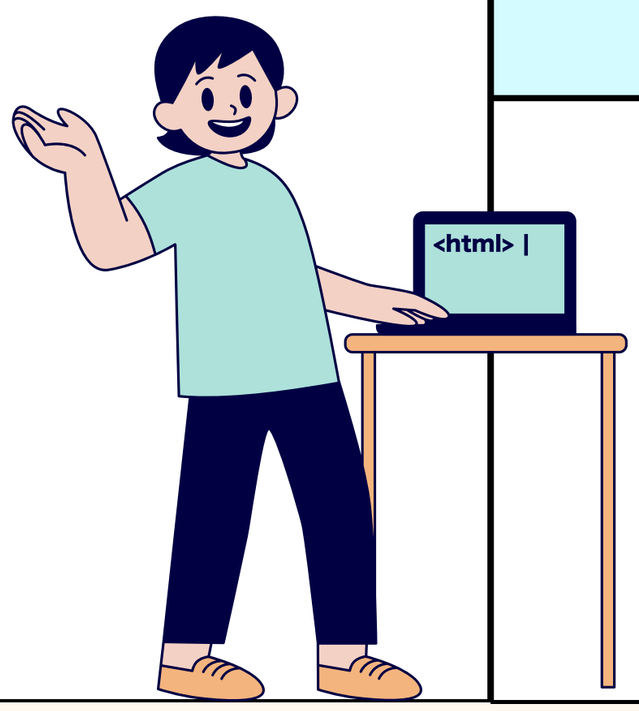
- R_username :Reviewr Username (Type:String)
- P_review : Product Review (Type:String)
- P_rating : Product Rating (Type:Int)
- Sentiment : Classify user-generated reviews into categories such as positive, negative, neutral (Type:String)

Business Scope



Our project involves designing a robust model that generalizes well across different product categories, mitigating biases, and addressing potential challenges such as varying review lengths and language nuances. The successful implementation of this sentiment analysis model will empower businesses to make data-driven decisions based on a comprehensive understanding of customer sentiments expressed in online product reviews. Moreover our model adds a powerful visualization to the product purchase. We can get idea about the purchasing impact of the products also.

- Interactive Dashboards:
  -Visual representation of sentiment trends for intuitive insights.
- Competitor Benchmarking:
  - Comparative visualizations for competitive benchmarking.
- Geographical Insights:
  - Regional sentiment mapping for targeted marketing strategies.
- Product Performance Metrics:
  - Holistic visual metrics summarizing product performance.
- Response Impact Analysis:
  - Visualizing the impact of seller responses on sentiment trends.
- Dynamic Data Filters:
  - Granular analysis through dynamic filters in visualizations.
- Forecasting Trends:
  - Predictive visualizations for proactive decision-making.



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