

Product Review Sentiment + Reasoning

Business Description:

The e-commerce feedback team needs an automated way to classify customer reviews and understand the emotional drivers behind negative feedback for escalation purposes. This tool automates sentiment detection, explanation generation, and provides a rephrasing feature to create brand-friendly responses.

A1 – User Interface (Web Application)

Link to UI: <https://4a0b95d94c15db35a1.gradio.live/>

The UI provides a simple review input area, sentiment badge, explanation text, and rephrase/export options.

A2 – Business Application Powered by AI

The application uses sentiment classification and LLM-based reasoning to process product reviews. It identifies sentiment polarity, explains the reason, and can rephrase reviews in a brand-friendly tone. Integrated into the UI for seamless use.

A3 – Cloud Hosted

Cloud Hosting Link: <https://huggingface.co/spaces/Ajapson/product-review-sentiment>

The system is deployed on a cloud platform to ensure high availability and accessibility.

Embedded AI Features

Feature	Description
Sentiment Classification	Classifies reviews into Positive, Neutral, or Negative using NLP models.
LLM-Generated Reasoning	Generates a detailed explanation for the sentiment classification.
Rephrase Capability	Rewrites reviews into neutral or brand-friendly tone.
Export Functionality	Allows exporting results to internal ticketing system.

System Flow

1. User enters review text. 2. Sentiment analysis model classifies it. 3. LLM generates reasoning for the classification. 4. Optional rephrasing is applied. 5. Results can be exported or copied.