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SECTION:G

Problem Statement :Customer Feedback Analyzer

ABSTRACT:

This project implements a Customer Feedback Analyzer using Hugging Face Transformers. The system analyzes customer reviews and classifies them as Positive or Negative based on sentiment. A pre-trained DistilBERT model is used through the Hugging Face sentiment-analysis pipeline, eliminating the need for manual training. The project demonstrates how pretrained transformer models can efficiently understand human language and extract emotional polarity from text. This approach is simple, fast, and suitable for real-world applications such as product review analysis and customer satisfaction monitoring.

What I understood

I learned that Hugging Face provides ready-to-use pipelines that allow us to apply powerful NLP models without training them from scratch. Sentiment analysis is a classification task where text is analyzed to determine whether the expressed opinion is positive or negative. Pretrained transformer models like DistilBERT are optimized for such tasks and provide high accuracy with minimal code.

What I built

I built a Customer Feedback Analyzer using the Hugging Face sentiment-analysis pipeline. The system takes customer reviews as input and predicts whether the feedback indicates a happy (positive) or angry (negative) customer. The model also provides a confidence score for each prediction. This project can be scaled to analyze hundreds of reviews at once and can be applied in e-commerce platforms, service feedback systems, and opinion mining applications.

Tools & Technologies Used

- Python
- Hugging Face Transformers
- Pretrained Model: distilbert-base-uncased-finetuned-sst-2-english
- NLP Task: Sentiment Analysis

Screenshots:

```
text = "The product quality is excellent and I am very happy with the service."
```

```
result = sentiment_analyzer(text)
print(result)
```

```
[{'label': 'POSITIVE', 'score': 0.999882698059082}]
```

```
def analyze_sentiment(text):
    return sentiment_analyzer(text)
```

```
analyze_sentiment("The delivery was late and the product is damaged.")
```

```
[{'label': 'NEGATIVE', 'score': 0.9997840523719788}]
```