**Project Charter: Review Analysis of a Product Using Natural Language Processing (NLP)**

**Project Title**

**NLP-Driven Product Review Analysis**

**Project Purpose and Justification**

The purpose of this project is to harness Natural Language Processing (NLP) to analyze customer reviews of a specific product. This analysis will provide insights into customer sentiments, preferences, and common complaints, enabling targeted improvements in product development, marketing strategies, and customer service. The project is justified by the need to better understand customer feedback in a structured and scalable way, enhancing decision-making processes and improving customer satisfaction.

**Project Objectives**

1. **Develop an NLP model** that can accurately interpret and categorize emotions, sentiments, and key thematic elements from customer reviews.
2. **Generate actionable insights** from review data that can inform product improvements, marketing adjustments, and enhanced customer support.
3. **Create a dashboard** for ongoing monitoring of customer reviews that updates in real-time and highlights trends, shifts in customer sentiment, and emerging issues.

**Scope**

* **In-Scope:**
  + Collection and preprocessing of review data from multiple online platforms.
  + Development of sentiment analysis models to classify reviews according to their sentiments.
  + Integration of NLP tools to extract key phrases and themes from text.
  + Creation of a user-friendly dashboard that displays insights and analytics from review data.

**Deliverables**

1. **NLP Model:** A trained sentiment analysis model capable of categorizing review sentiments with high accuracy.
2. **Analytics Dashboard:** An interactive dashboard that presents real-time analytics on customer reviews.
3. **Final Report:** Documentation detailing the methodologies used, insights gained, and recommendations for future actions.