**Customer Sentiment Analysis Report – iPhone 15 128GB (Flipkart)**

**1. Overview of Data Collection and Cleaning**

Data was collected from customer reviews of the iPhone 15 128GB on Flipkart, covering **300 reviews**. The scraping process captured usernames, review text, and ratings.

* **Cleaning Steps:**
  + Removed special characters and symbols from reviews.
  + Ensured all columns had equal length and no missing values.
  + Converted ratings to numerical format for analysis.
  + Prepared text for sentiment analysis using **TextBlob** to generate polarity and subjectivity scores.

**2. Sentiment Analysis Results**

* **Rating Distribution:**
  + **5-star:** Majority of reviews (dominant sentiment is **very positive**)
  + **4-star:** Moderate share, still positive but with minor complaints.
  + **3-star and below:** Minimal proportion, typically related to battery life or heating issues.
* **Sentiment Scores:**
  + **Average Polarity:** High positive sentiment (~0.6–1.0 for most reviews)
  + **Average Subjectivity:** High (~0.7–1.0), indicating reviews are based on personal experience and opinion.
* **Common Themes by Sentiment:**
  + **Positive:** Camera quality, design aesthetics, smooth performance, Dynamic Island feature, display quality, Apple ecosystem integration.
  + **Negative:** Battery drains faster than expected, heating during prolonged use or charging, absence of higher refresh rate (60Hz vs. competitors).

**3. Key Insights**

* **Strong Points:**
  + Camera performance is the top highlight; customers frequently compare it favorably to previous iPhone models and competitors.
  + The design, light weight, and premium feel are consistently praised.
  + The A16 Bionic chip delivers smooth, lag-free performance.
  + Many customers value integration with other Apple devices.
* **Areas of Concern:**
  + Battery life is the most common complaint, especially for heavy users.
  + Heating issues occur during charging, gaming, or extended camera use.
  + Several customers feel the 60Hz refresh rate is outdated at this price point.

**4. Recommendations**

**For Product Improvement:**

* Enhance battery capacity or optimization to meet heavy-usage needs.
* Address thermal management to reduce heating during intensive tasks.
* Consider upgrading the refresh rate in future models to match market standards.

**For Flipkart’s Marketing Focus:**

* Emphasize **camera quality**, **premium design**, and **seamless performance** in promotional campaigns.
* Highlight **exclusive deals**, **fast delivery**, and **Apple ecosystem benefits**.
* Address concerns transparently in product Q&A (e.g., battery performance expectations, refresh rate limitations).