Norwegian Cruise Line
Guest Experience Analytics – Detailed Report

This document presents a detailed, data-driven analysis of guest feedback using Natural Language Processing (NLP). The objective is to evaluate guest sentiment, diagnose dissatisfaction drivers, and provide actionable insights for operational and strategic decision-making.

1. Data Overview & Scope

The analysis is based on approximately 414,000 unstructured guest comments collected across eight Norwegian Cruise Line ship classes. The dataset represents direct voice-of-customer feedback spanning multiple experience tiers, enabling both comparative and diagnostic analysis.

2. Analysis 1 – Sentiment Analysis by Ship Class

Each guest comment was processed using the VADER sentiment model to generate a compound sentiment score ranging from -1 (very negative) to +1 (very positive). Sentiment scores were aggregated by ship class to assess relative guest satisfaction levels.

Table 1. Average Sentiment by Ship Class

Ship Class	Average Sentiment Score	Interpretation
Prima	0.38	Highest satisfaction; premium benchmark
Breakaway	0.34	Strong and consistent experience
Jewel	0.33	Stable upper-mid tier performance
PoA	0.31	Positive but expectation-sensitive
Spirit	0.30	Moderate satisfaction
Sun	0.29	Acceptable budget-tier experience
Epic	0.19	Underperformance relative to positioning
Dawn	0.10	Lowest satisfaction; aging ship effects

While most ship classes show positive average sentiment, Epic and Dawn classes underperform significantly, indicating potential expectation gaps and experience consistency issues.

3. Analysis 2 – Driver (Theme) Analysis of Negative Feedback

To understand the root causes of dissatisfaction, negative sentiment comments were isolated and analyzed. Text was tokenized and grouped into business-relevant themes, allowing quantification of complaint drivers by ship class.

Table 2. Distribution of Negative Feedback Themes by Ship Class

Ship Class	Cabin Exp. %	Food & Dining %	Service Quality %	Excursions & Ports %
Breakaway	16.11	28.05	22.15	-
Dawn	-	26.95	21.16	15.41
Epic	21.67	23.14	20.63	-
Jewel	16.98	28.68	21.68	-
PoA	15.48	32.51	22.69	-
Prima	15.44	31.92	22.19	-
Spirit	15.71	29.53	19.43	-
Sun	17.83	32.04	20.05	-

Food & Dining emerges as the dominant dissatisfaction driver across all ship classes, followed by Service Quality. Cabin Experience issues are more prominent in older or flagship ships, while Excursions-related dissatisfaction is concentrated in specific classes.

4. Strategic Implications & Prioritization

The combined sentiment and driver analyses suggest that guest dissatisfaction is driven primarily by experience execution rather than pricing or itinerary alone. Improvements should therefore prioritize high-frequency and high-impact experience areas.

Priority Areas:
• Improve food quality consistency across all ship classes
• Address cabin condition and maintenance issues in Epic and Dawn classes
• Enhance service process efficiency during peak periods
• Align premium marketing promises with onboard delivery

5. Conclusion

This analysis demonstrates how large-scale unstructured guest feedback can be converted into actionable insights using NLP techniques. By identifying both performance gaps and their underlying drivers, Norwegian Cruise Line can prioritize targeted interventions to improve guest satisfaction, protect brand equity, and enhance long-term loyalty.