CUSTOMER FEEDBACK ASSESSMENT

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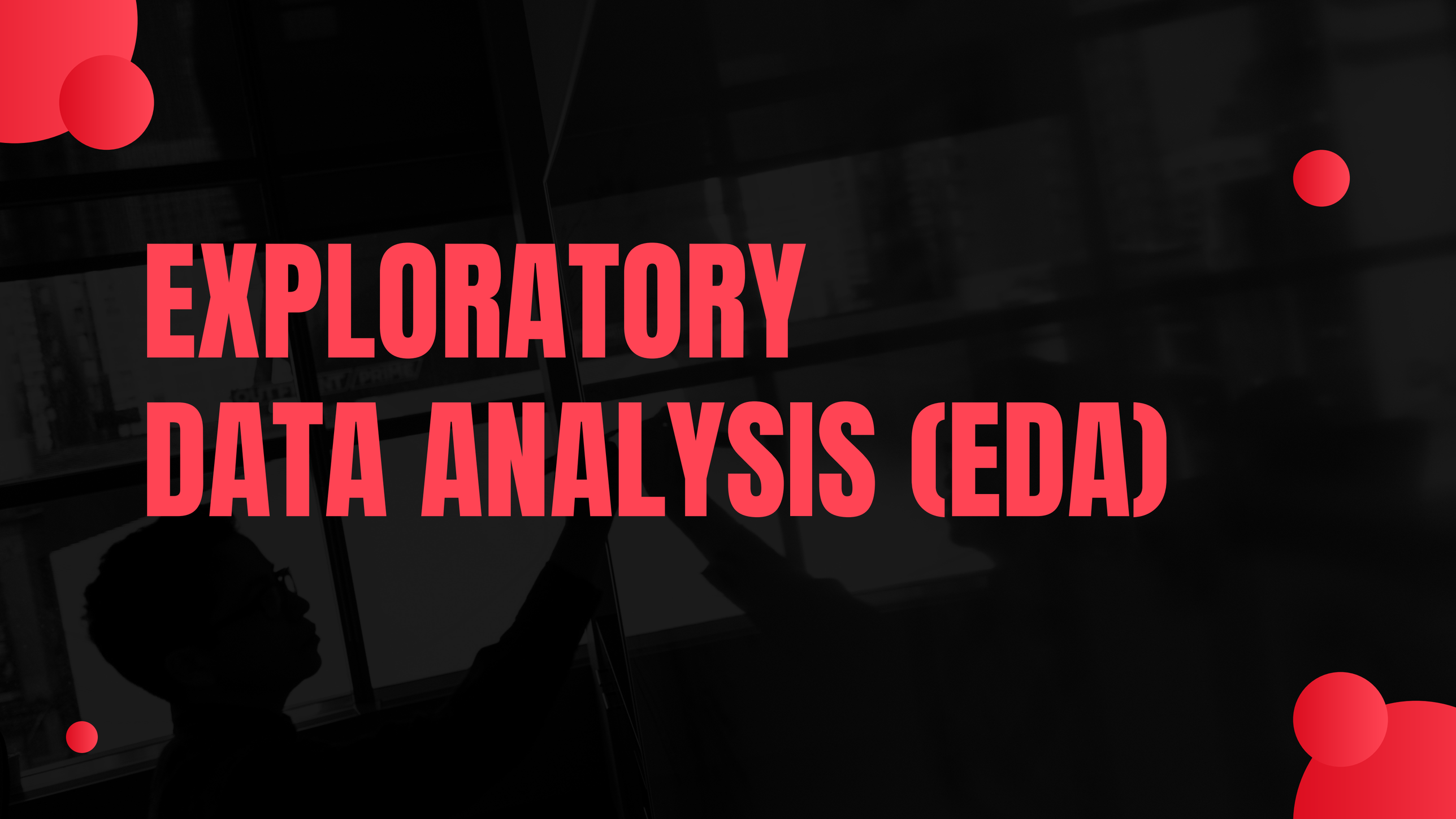


EXPLORATORY DATA ANALYSIS (EDA)

ABOUT THE DATA

Primarily Text-Based

Most of the features are in text format, such as names, mine sites, and observations. This makes the dataset well-suited for natural language processing and text analytics.

Rich Customer Feedback

The dataset contains 793 unique observation texts linked to named individuals, offering detailed qualitative insights into the customer experience.

Customer Score via NPS

NPS scores range from 2 to 10, with 8 distinct values. This provides a clear scale to classify customer satisfaction levels

Mine Site Diversity

Feedback is sourced from 424 unique mine sites, including major operations like Gold Fields Ghana and Meliadine Mine. This broad scope enables location-based performance comparisons.

THE DATA ANALYSIS PROCESS

Library Setup

Key Python libraries such as pandas, numpy, matplotlib, seaborn, VADER, and TextBlob were imported to handle data manipulation, visualization, and sentiment analysis.

Sentiment Analysis

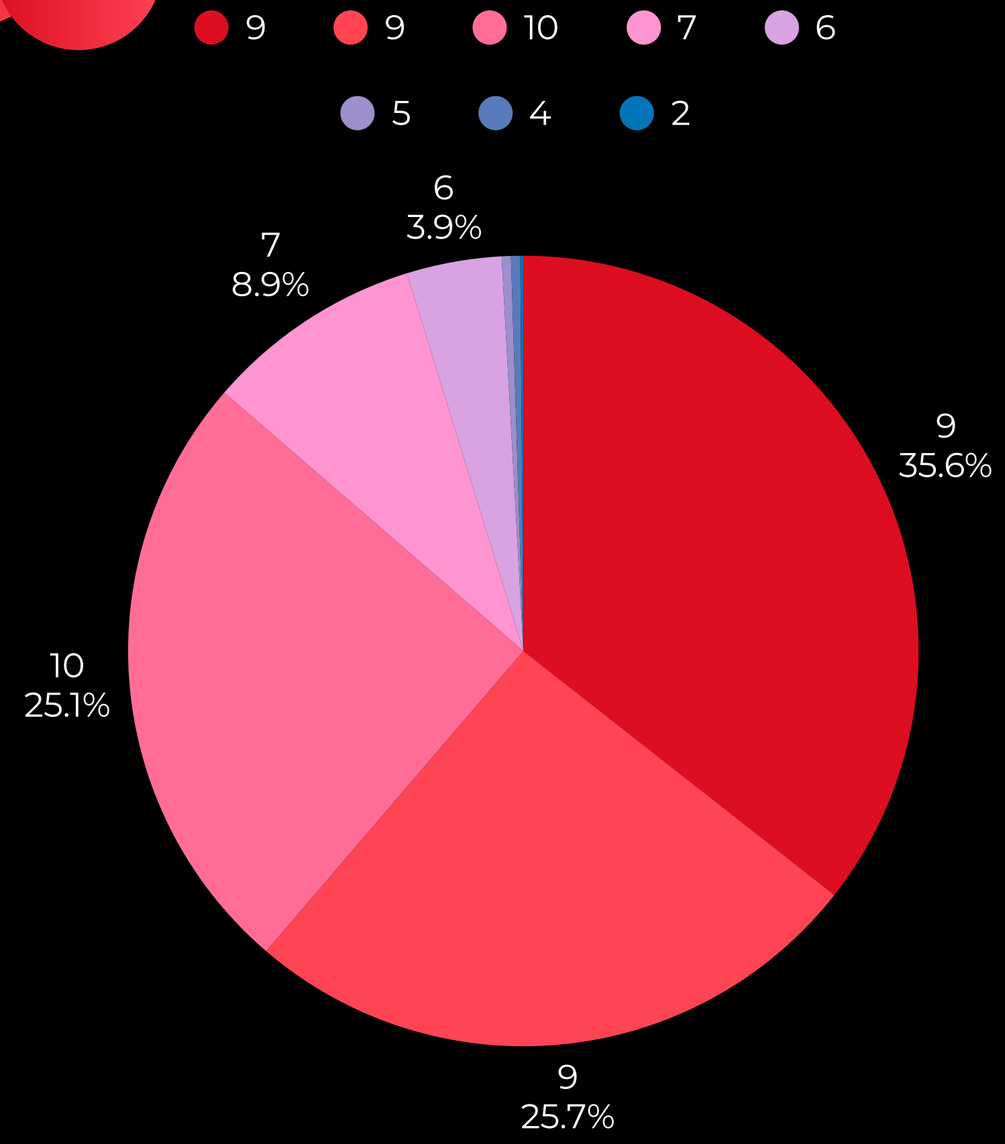
Customer feedback was analyzed using both VADER and TextBlob to classify sentiments as positive, neutral, or negative. This dual approach provided a more robust understanding of customer emotions across different mine sites.

Data Cleaning

A custom text-cleaning function was applied to standardize and sanitize the text fields. This included expanding contractions, removing special characters, and lowering text cases—ensuring consistent input for reliable sentiment processing.

Actionable Recommendations

Insights from sentiment trends and text patterns were translated into specific recommendations for improving site performance, addressing recurring complaints, and enhancing overall customer satisfaction.



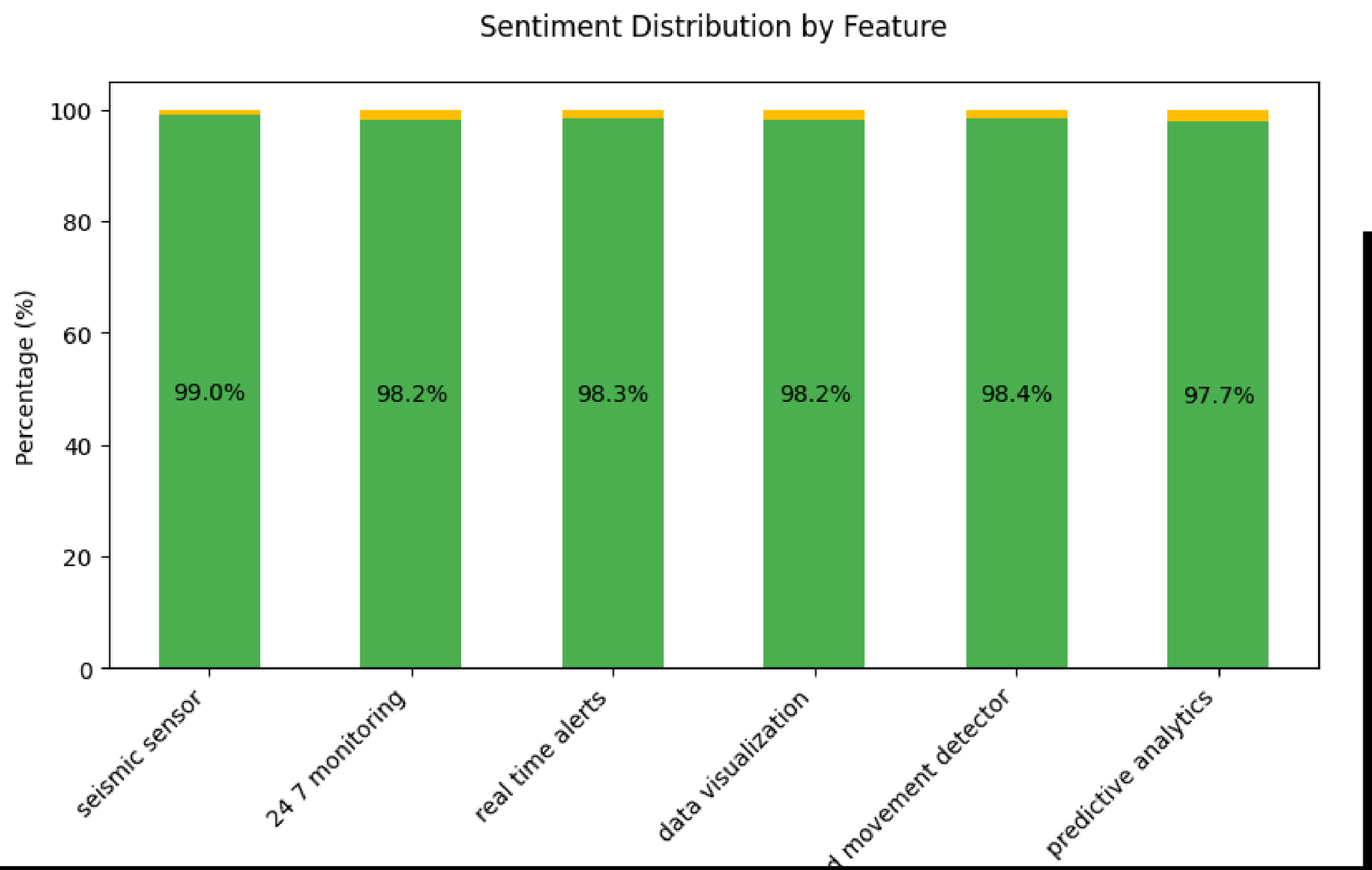
NPS SCORE

86%

customers

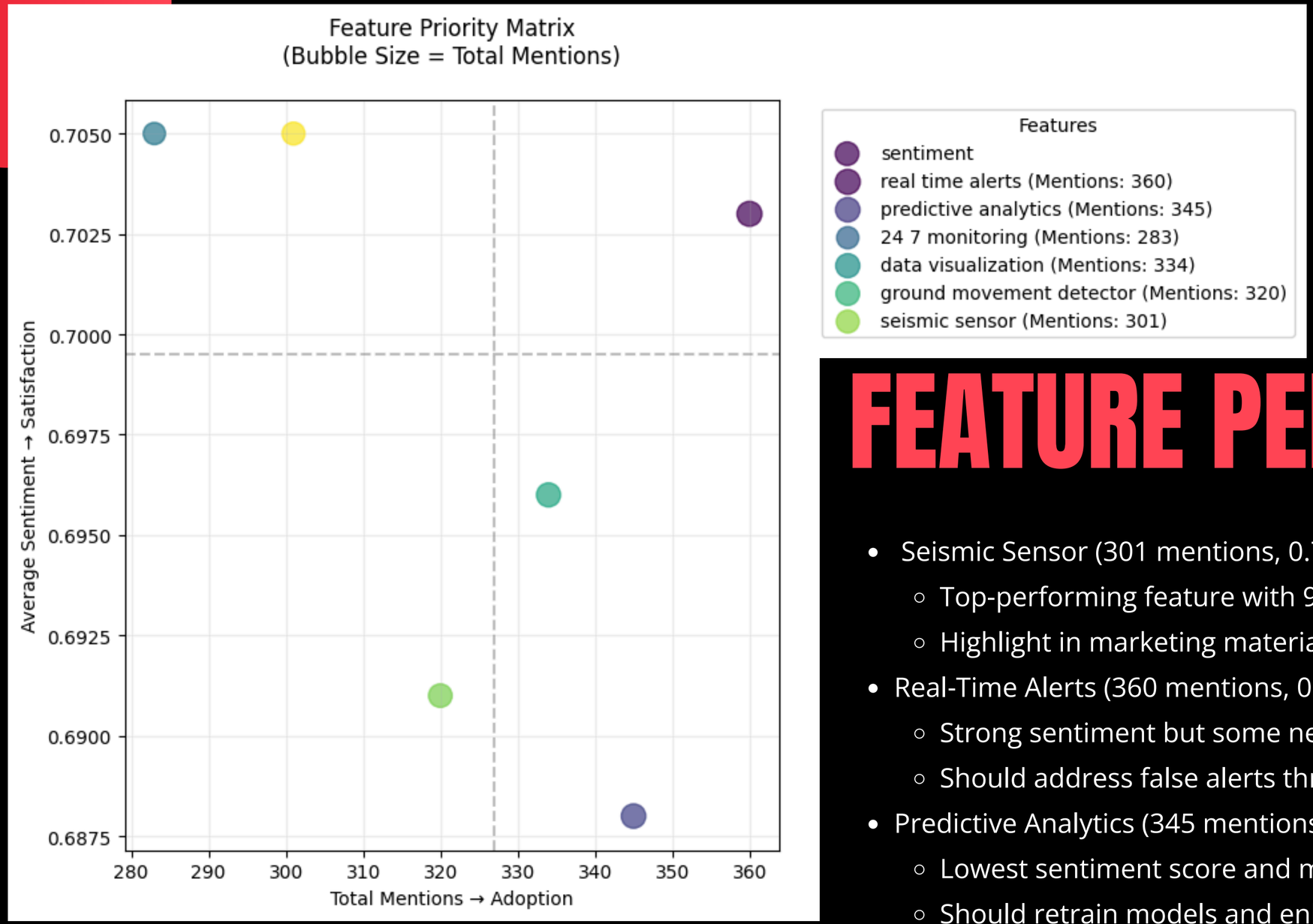
give an NPS score of 8 or above, indicating that most customers are satisfied and likely to recommend the service.

Although the overall sentiment is positive, there are a few low scores—1 response with a score of 2, and 6 responses between 4 and 6. These outliers may highlight specific issues that should be investigated further.



FEATURES SENTIMENT

- Seismic sensor received the highest positive sentiment with 99% positive feedback, indicating strong customer approval.
- All features show over 97% positive sentiment, reflecting overall customer satisfaction across the board.
- Neutral and negative sentiments are minimal across all features,



FEATURE PERFORMANCE

- Seismic Sensor (301 mentions, 0.705 sentiment)
  - Top-performing feature with 99% positive sentiment
  - Highlight in marketing materials
- Real-Time Alerts (360 mentions, 0.703 sentiment)
  - Strong sentiment but some negative feedback points to false alarms
  - Should address false alerts through updates
- Predictive Analytics (345 mentions, 0.688 sentiment)
  - Lowest sentiment score and minor concerns about reliability
  - Should retrain models and enhance system accuracy

NEGATIVE SENTIMENT TOP ISSUES

False Alarms

- *“FX radar triggers false alarms consistently“*
- Mentioned in 7 from 20 lowest sentiment observations
- Review calibration protocols

Software Reliability

- "New radar unit underperforms vs old version"
- Mentioned in 5 from 20 lowest sentiment observations
- Prioritize legacy software compatibility in next sprint

Customer Support Delays

- *"Takes days to respond to critical issues"*
- Mentioned in 6 from 20 lowest sentiment observations
- Introduce SLA (Service Level Agreement) tiers for critical issues

Issues from Low NPS Score (<5)

- Slow emergency support
- Delays in replacing faulty radars (e.g., SSR Omni).
- Rare technical visits and inadequate servicing.
- Long response times, especially for remote locations (e.g., mines)

CONCLUSION

Key Findings:

- 86% NPS (8+ scores) – Strong satisfaction, but critical pain points persist among detractors (scores 4-6).
- Top Issues: False alarms, software reliability, slow emergency support, and delayed equipment replacements.
- Feature Performance: Seismic sensor (99% positive), but predictive analytics and real-time alerts need refinement (false alarms).

Recommended Actions:

- Enhance Support & SLAs – Tiered response system for critical issues (e.g., 24hr resolution for hardware failures).
- Reduce False Alarms – Recalibrate radar and optimize predictive analytics models.
- Proactive Maintenance – Scheduled on-site visits and faster replacements


THANK YOU