

# Customer Sentiment & Business Insights Report

## 1. Data Summary:

- Customer reviews were scraped from Trustpilot for Boat and Noise.
- The dataset included:
  - Review Text, Rating, Date, Location, Brand Label**
- Cleaning steps included removal of duplicates, missing values, and neutral (3-star) reviews.
- Ratings were mapped into:
  - Positive Sentiment:** 4–5 stars
  - Negative Sentiment:** 1–2 stars
- Final dataset showed a heavy skew toward negative feedback, indicating strong dissatisfaction across the customer base.

## 2. Sentiment Findings:

- Overall sentiment distribution is **highly negative**, with negative reviews forming the majority.
- Brand-wise:
  - Boat** accounts for most negative reviews due to higher volume.
  - Noise**, though smaller in volume, also shows more negative than positive sentiment
- Sentiment imbalance highlights systemic experience issues rather than isolated cases.

## 3. Customer Behavior Insights:

- Customers with negative experiences tend to write longer, more detailed reviews, indicating frustration and emotional involvement.
- Positive reviewers are fewer and typically provide shorter, transactional feedback.
- This shows that unhappy customers are more motivated to voice concerns publicly, driving negative perception faster than positive advocacy.

## 4. Key Negative Issues:

- Top complaint terms include product, service, customer, warranty, replacement, working, and company.
- Core pain points: Product failures or defects, Poor durability, Warranty and replacement challenges, Delayed or unresolved claims
- Noise sees early product failure complaints (“day,” “watch”), indicating possible batch or quality issues

## 5. Service & Refund Insights:

- A large portion of negative reviews reference:
  - Support delays**
  - Slow refunds**
  - Replacement backlogs**
  - Poor communication**
- Customers express not just disappointment, but abandonment after purchase.

- The **service breakdown amplifies dissatisfaction** beyond the original product issue.

#### 6. **Trend Findings:**

- Negative sentiment remains persistent month-over-month, with no visible recovery periods.
- Positive sentiment is sporadic and significantly lower in frequency.
- The trend indicates:
  - Long-term unresolved issues
  - Lack of operational intervention
  - Continued erosion of brand trust

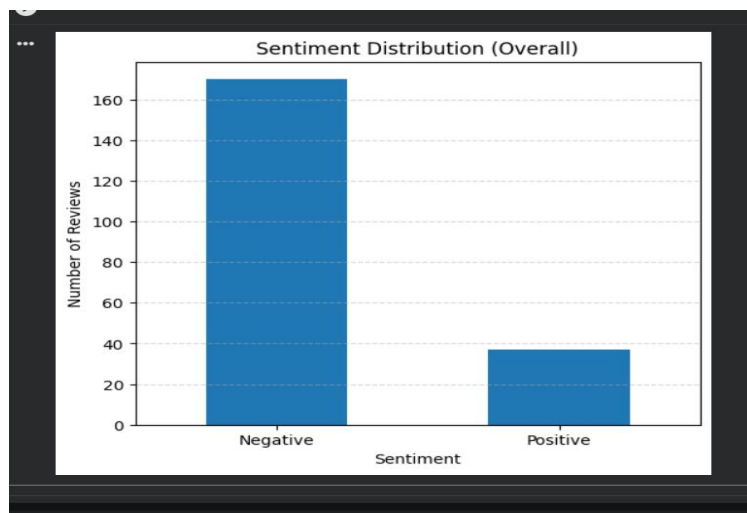
#### 7. **Machine Learning Outcome:**

- A TF-IDF + Logistic Regression model was deployed to classify sentiment automatically.
- Data was split 80:20 for training and testing.
- Metrics computed included:
  - Accuracy : 0.9048**
  - Precision : 1.0000**
  - Recall : 0.5000**
  - F1-score : 0.6667**
- Model performance was strong enough to support automated monitoring and escalation.
- The model and vectorizer were saved for deployment, enabling real-time sentiment classification.

#### 8. **Classification report:**

	<b>Precision</b>	<b>Recall</b>	<b>F1 score</b>	<b>support</b>
<b>Negative</b>	<b>0.89</b>	<b>1.00</b>	<b>0.94</b>	<b>34</b>
<b>Possitive</b>	<b>1.00</b>	<b>0.50</b>	<b>0.67</b>	<b>8</b>
<b>Accuracy</b>			<b>0.90</b>	<b>42</b>
<b>Macro avg</b>	<b>0.91</b>	<b>0.75</b>	<b>0.81</b>	<b>42</b>
<b>Weighted avg</b>	<b>0.95</b>	<b>0.90</b>	<b>0.89</b>	<b>42</b>

#### 9. **Business Insights (Chart-Driven):**



**Insight:**

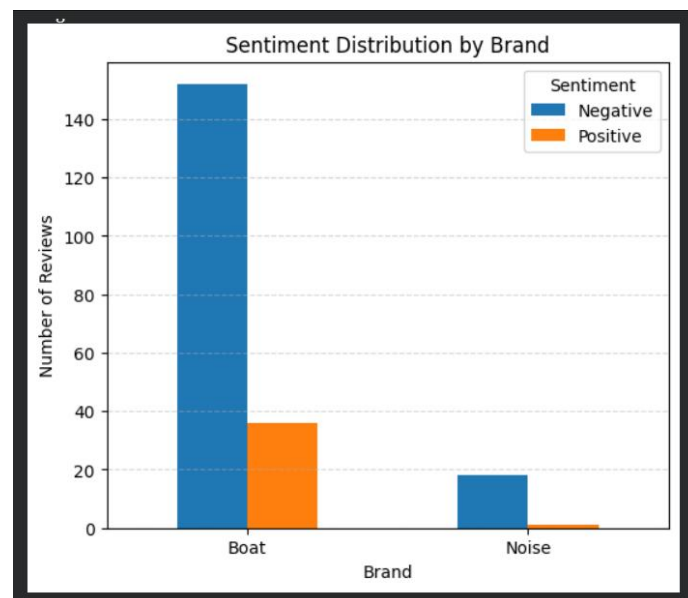
Negative reviews significantly outweigh positive reviews—**roughly 80–85% of all feedback is negative.**

**Business Impact:**

- Brand perception is currently under stress.
- High dissatisfaction increases churn and damages trust.
- Marketing spend is at risk of underperforming due to weak sentiment.

**Strategic Signal:**

This is not a product awareness issue—this is a product experience and service issue.



**Insight:**

Boat contributes the bulk of negative reviews, while Noise has fewer total reviews but still skews negative.

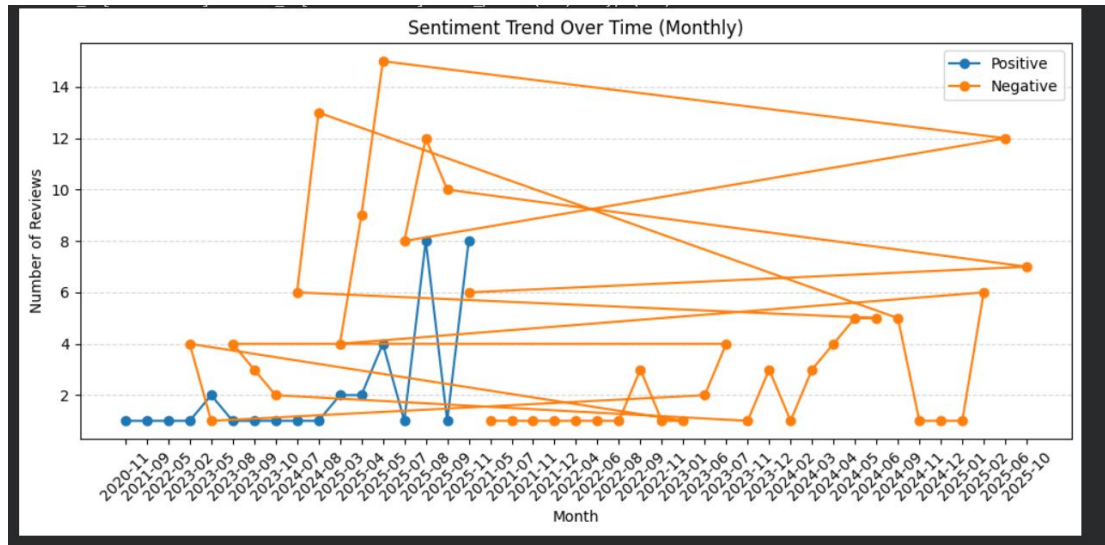
### **Business Impact:**

Boat's scale means negative sentiment is amplifying across a larger customer base.

Noise's lower positive volume suggests low delight and weak advocacy.

### **Strategic Signal:**

Boat needs urgent service and quality intervention; Noise needs brand-building and CX improvement to lift trust.



### **Insight:**

The monthly trend shows sustained negative feedback across multiple months, with no visible recovery spikes.

### **Business Impact:**

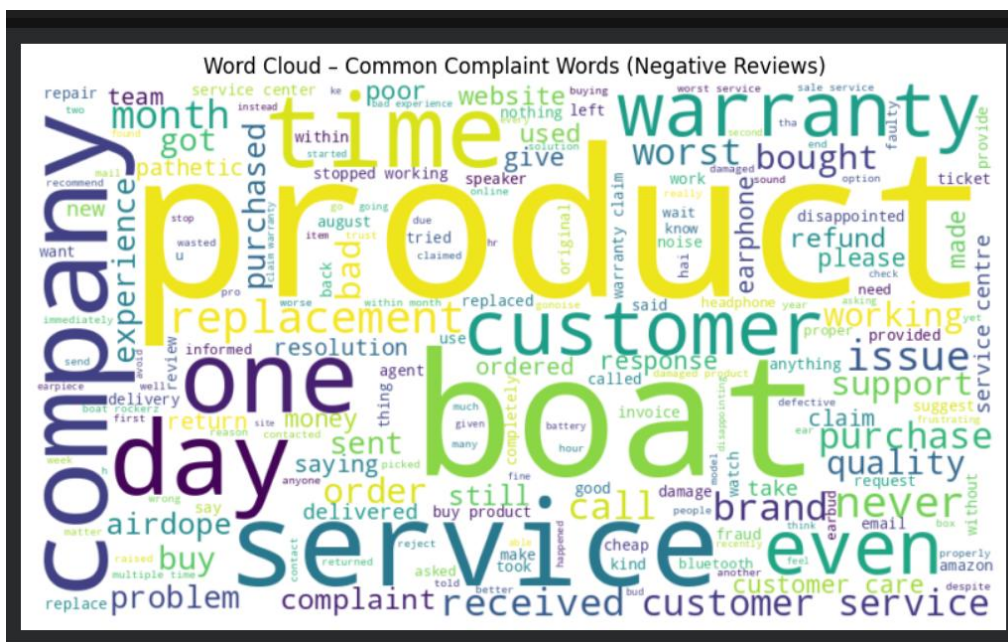
Problems are systemic, not seasonal.

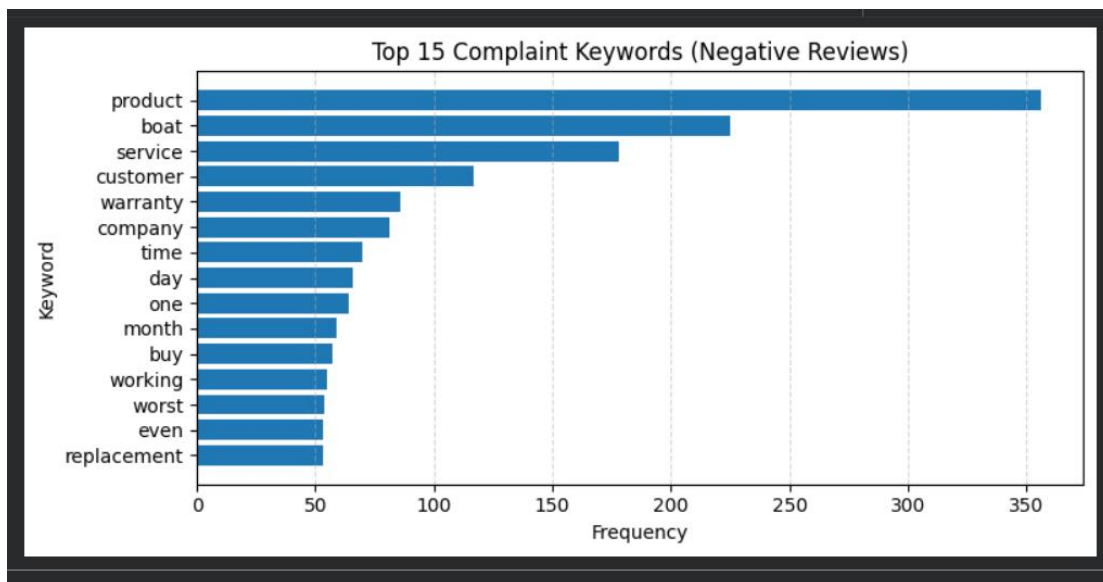
Issues are going unresolved and compounding.

No evidence of successful corrective action in recent months.

### **Strategic Signal:**

Leadership needs to treat this as a long-term operational failure rather than temporary noise.





### Insight:

Top negative keywords highlight “**product**,” “**working**,” “**warranty**,” “**replacement**,” “**company**.”

### Business Meaning:

Products are failing prematurely.

Warranty and replacement processes are broken or slow.

Defects are driving most complaints—not just service attitude.

### Strategic Signal:

Quality assurance and failure rate reduction will have the highest ROI in sentiment improvement.

	Boat	Noise
Rank 1	product	product
Rank 2	boat	noise
Rank 3	service	day
Rank 4	customer	watch
Rank 5	warranty	service

## **Brand-Level Complaint Patterns Differ**

### **Boat**

Top concerns: product → service → customer → warranty

Insight: Product failure + weak support loop

### **Noise**

Top concerns: product → “day” → watch → service

Insight: Products failing quickly after purchase (“day”)—possible batch defects

### **Strategic Signal:**

Boat needs service overhauls; Noise needs product reliability fixes.

## **10. What This Means for the Business**

### **Root Cause**

Customers are not upset because products are cheap—  
**they’re upset because products fail AND the company fails to respond.**

### **Brand Risk**

If this trend continues:

- Organic trust will collapse
- CAC will increase
- Repeat purchases will drop
- Returns/refunds costs will rise

### **Opportunity:**

A strong recovery play exists:

- Service improvements can rapidly flip sentiment
- A warranty-first CX model can turn detractors into promoters

## **11. High-Priority Action Plan:**

### **Immediate (0–30 Days)**

- ✓ Deploy Fast-Track Replacement Policy
- ✓ Set clear resolution SLAs (3–5 days max)
- ✓ Launch proactive communication during delays

### **Short Term (30–90 Days)**

- ✓ Service team expansion or automation
- ✓ Warranty claim workflow digitization
- ✓ Product failure diagnostic and batch testing

### **Long Term (90+ Days)**

- ✓ Product redesign based on failure modes
- ✓ Loyalty win-back program for past detractors
- ✓ Real-time sentiment monitoring dashboard

## **12. Key Metrics to Track**

- Monthly % Negative Reviews
- Average Resolution Time
- First Response Time
- Warranty Claim Success Rate
- Product Failure Rate (within 30 days)
- CSAT / NPS Post-Resolution
- Repeat Purchase Rate
- Model Accuracy & Drift

## **13. Final Conclusion:**

- The business is not losing customers due to pricing or competition—  
**it is losing customers due to unreliable products and broken service experiences.**
- The fastest path to recovery is:
  - Reduce product failures
  - Resolve issues faster
  - Communicate transparently



- Fixing product quality and post-purchase service will deliver the highest impact on customer trust, retention, and long-term brand growth.