

Twitter Sentiment Analysis for Apple Products

By group 11 DSFT-13



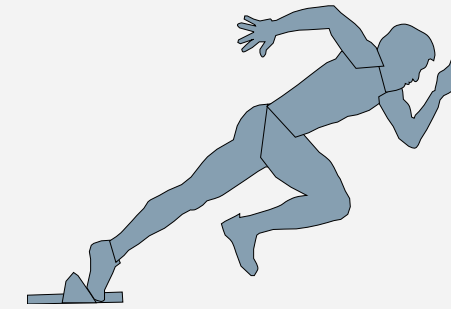
Transforming How We Listen to Customers



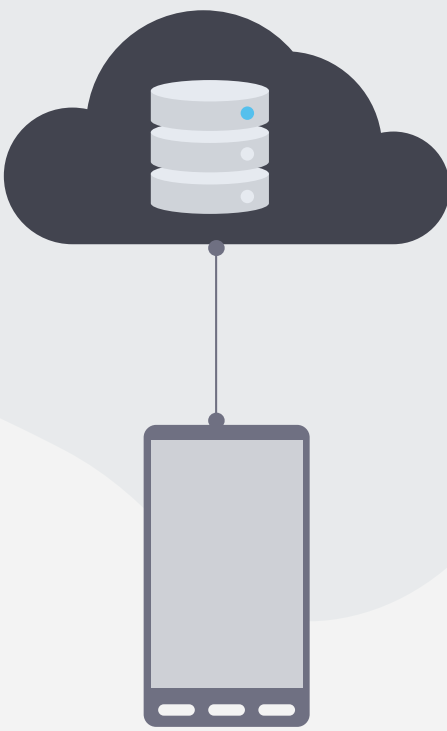
- Automated system to classify Twitter sentiment in real-time



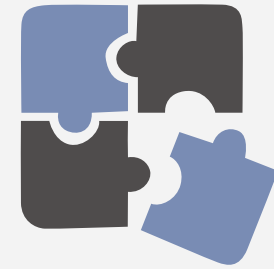
- Focus on catching customer complaints quickly



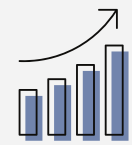
- Enables faster response to product issues
- Deploy the Classifier



Why We Need This Solution



The Challenge We Face



- Thousands of daily mentions about Apple products on Twitter

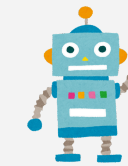


- Manual sentiment analysis is slow and inconsistent



- Critical complaints get missed or delayed

Our Automated Solution



- Real-time Twitter sentiment classification



- Enables faster response to issues



- Focus on catching complaints automatically

- **Business Value:** Improved customer satisfaction & product quality





What We Set Out to Achieve





- **Primary Objective:** Catch customer complaints automatically

OUR TARGETS:

-  **>45% Negative Recall | Achieved: 50%**
 - Catch nearly half of all complaints

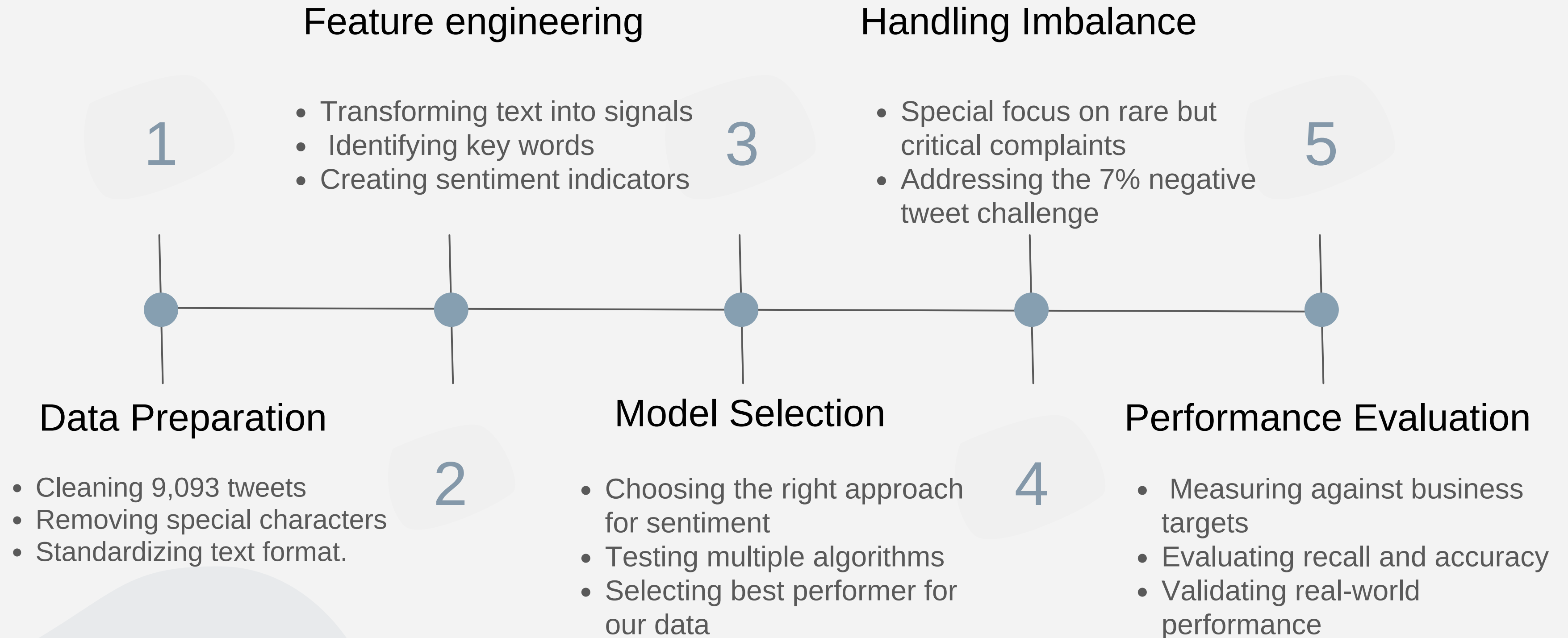
-  **Handle Imbalanced data**
 - Focus on rare but critical feedback

-  **Real-Time Preprocessing**
 - Instant analysis of thousands of tweets

-  **Deliver Actionable Insights**
 - Product teams can trust and act on results

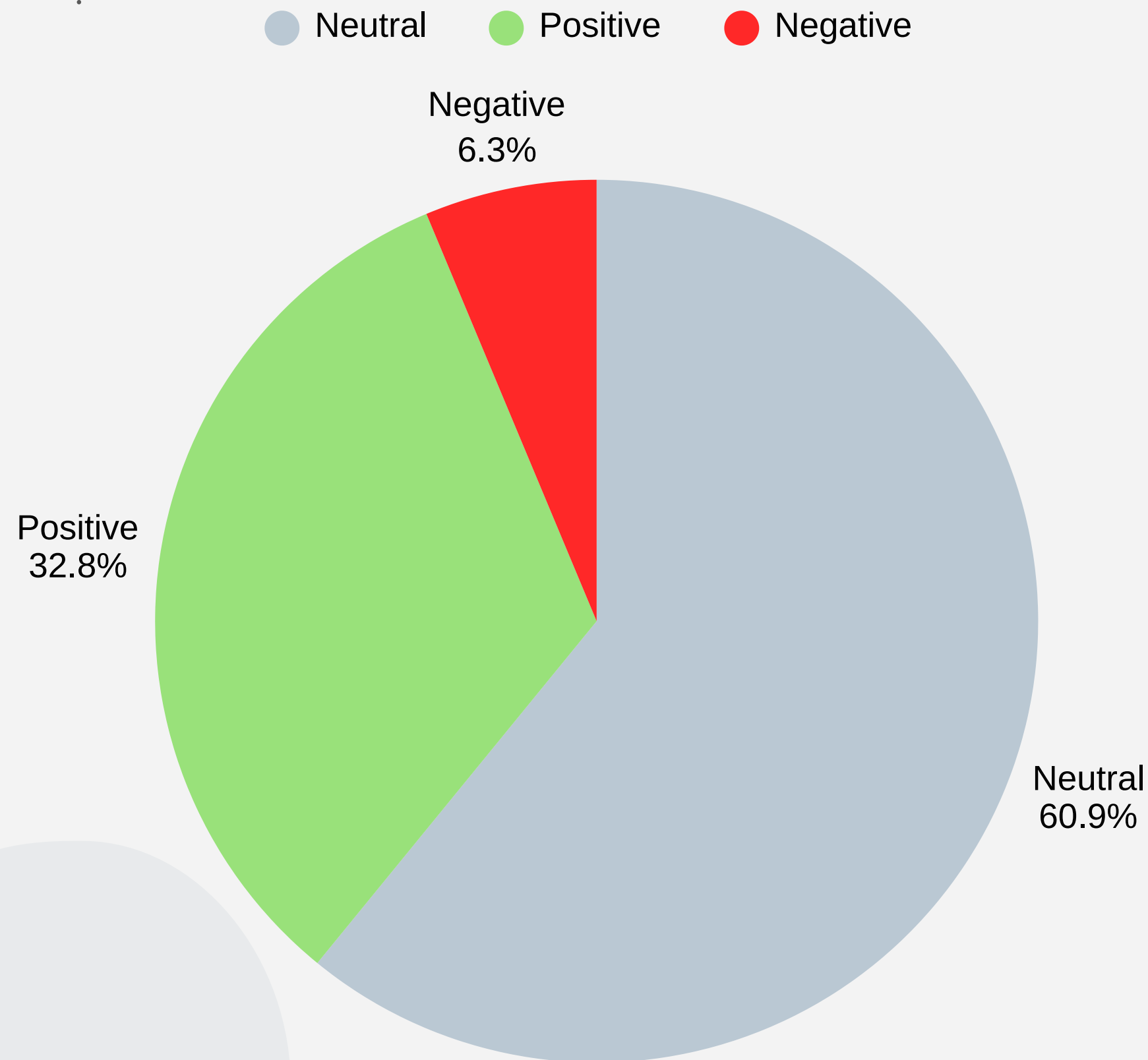


Our 5-Step Analysis Journey



The critical 6%: where the Business value lives

Sentiment Proportion



Key Insights:

- 61% Neutral tweets
- 33% Positive feedback
- 6% Negative = Customer Complaints

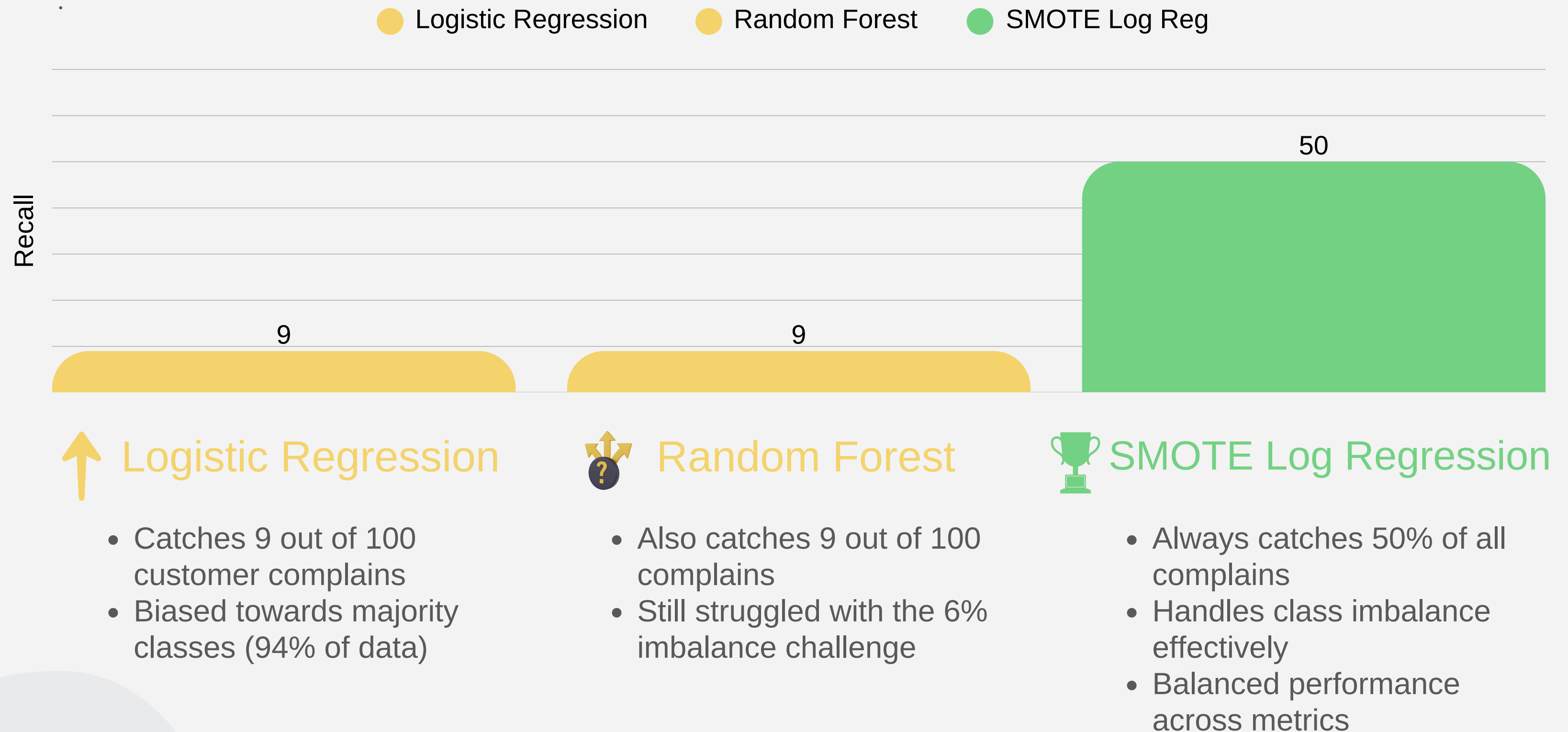
Business Impact:

- The rare 570 negative tweets (6% of total) represent our biggest opportunity for customer satisfaction improvement

Data:

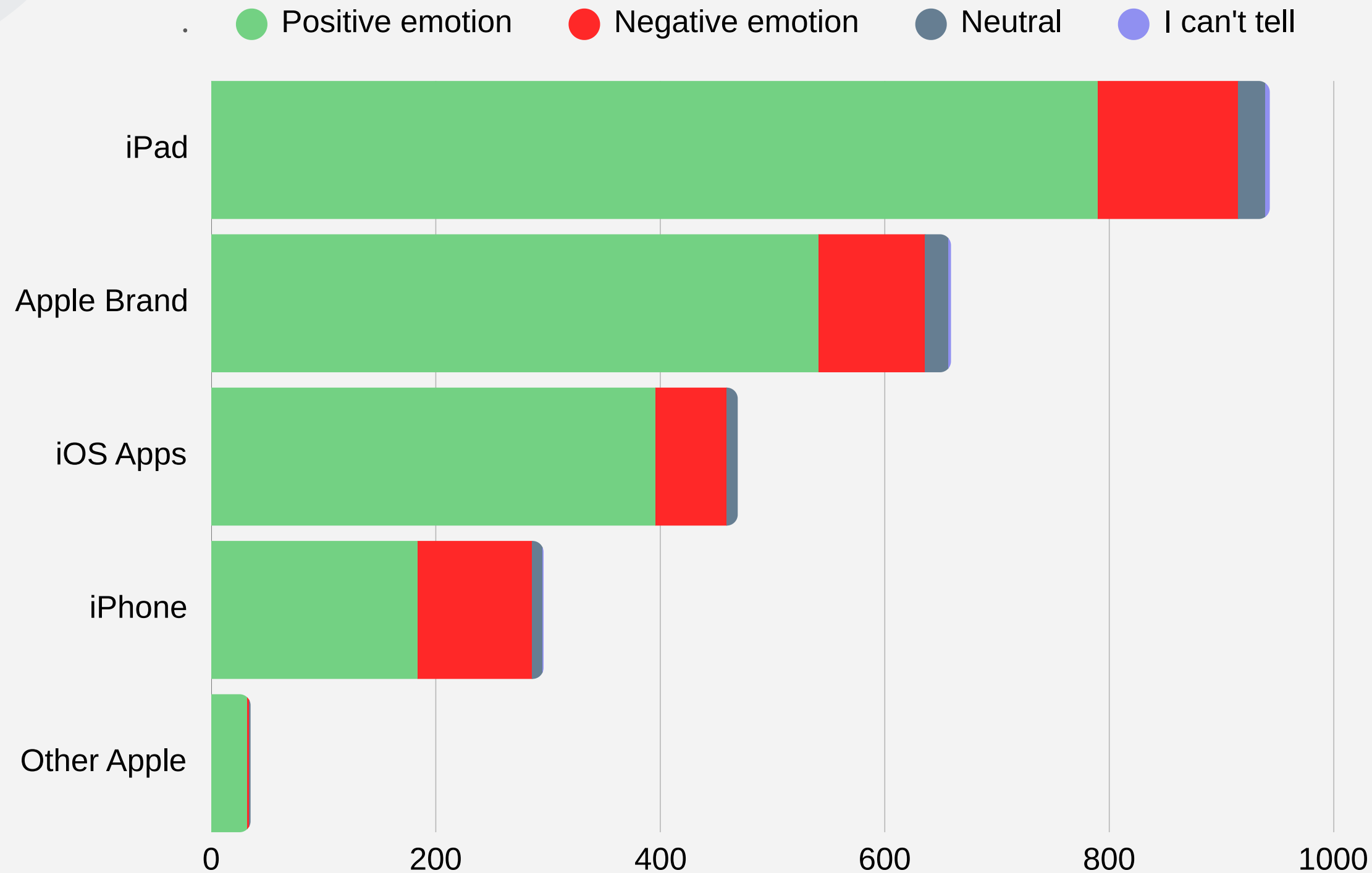
- 9,093 human-labeled tweets from CrowdFlower

Choosing the Right Approach: Why SMOTE Won



Business Impact: Targeted Product Insights

Products vs. sentiments



Priority actions:



iPhone:

- Urgent attention needed
- 34% of tweets are complaints
- Focus on core functionality



iPad:

- Monitor and maintain
- High volume, moderate complaints
- Continue current quality



iOS Apps:

- Success story
- 84% positive sentiment
- Expand successful features

- *Targeted product insights drive high-impact improvements in customer satisfaction.*

Recommendations: From Insights to Impact



Immediate Actions

Integrate real-time monitoring
Set up automated alerts
Team training on dashboard



Strategic Focus Areas

iPhone: Address core functionality issues
iPad: Maintain quality, monitor trends
iOS Apps: Expand successful features



Longterm Value

Quarterly model updates
Platform expansion (Instagram,
Reddit)
Product launch sentiment tracking

Our Evolving Customer Intelligence



Current Capabilities

Twitter sentiment
Real-time analysis
Product-specific insights
50% complaint recall



Next Phase Development

Q1 2026: Instagram + Reddit integration
Q2 2026: Predictive analytics prototype
Q3 2026: Global sentiment expansion



Future Vision:

Multi-platform monitoring
Predictive issue detection
Automated response system
Global market intelligence

From Notebook to production: Live Demo



Deployed & Ready to Use

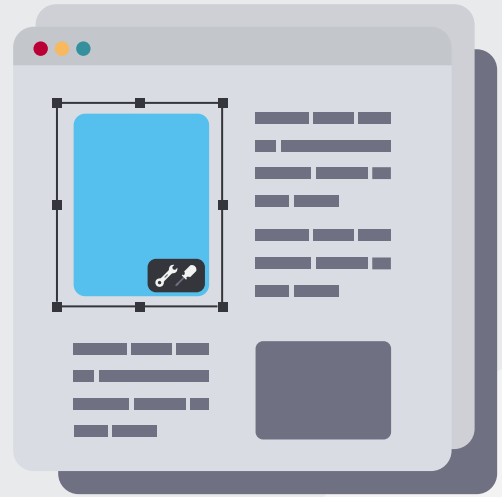
Real-time web application
Accessible on any device
Instant sentiment predictions

 *Link*

Features

Test with any Apple product tweet
See confidence scores for each prediction
Understand model decision-making





Thanks!

Do you have any questions?

[Github](#)

[Sentiment Classifier App](#)

