

Decoding Satisfaction

What actually drives mobile phone ratings?

Shanay Murdock

WGU Data Science Graduate Student, D606 Capstone

Presenter Profile

Shanay Murdock

Data Science Graduate Student | WGU

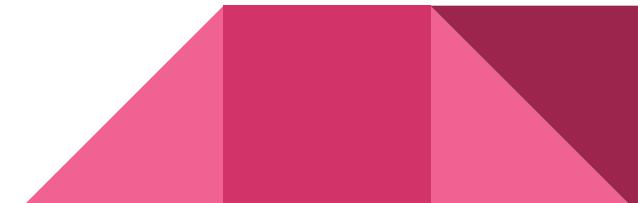
Business Systems Analyst | Florida
State University

Tech + Anthropology background:
Focused on the human-driven
“whys” behind the numbers



Today's Roadmap

- The business problem & guiding hypothesis
- Data and analysis process
- Key findings: What matters to customers
- Limitations and caveats
- Strategic actions
- Expected benefits



The Big Question

- **Challenge:** Where do we invest for maximum customer satisfaction?
- Gut instinct? Branding? Price? Features?
- **Hypothesis:**
 - Can a statistical model predict overall customer satisfaction with an accuracy of 70% or better?

Data & Analysis Overview

- 50,000 global customer reviews, 8 countries
- Looked at brand, price, and main technological features (camera, battery, design, etc.)
- Used a step-by-step “decluttering” process:
 - ◆ Start with all variables
 - ◆ Remove what doesn’t influence satisfaction
 - ◆ Keep only true predictors of customer satisfaction

All Features → Eliminate Non-Predictors → Key Drivers Remain

Key Findings: The Five Pillars of Satisfaction

Only 5 features truly matter for high ratings:

- **Battery Life**
- **Camera Quality**
- **Performance (Speed, smoothness)**
- **Design**
- **Display**

Weakness in any one lowers overall customer satisfaction

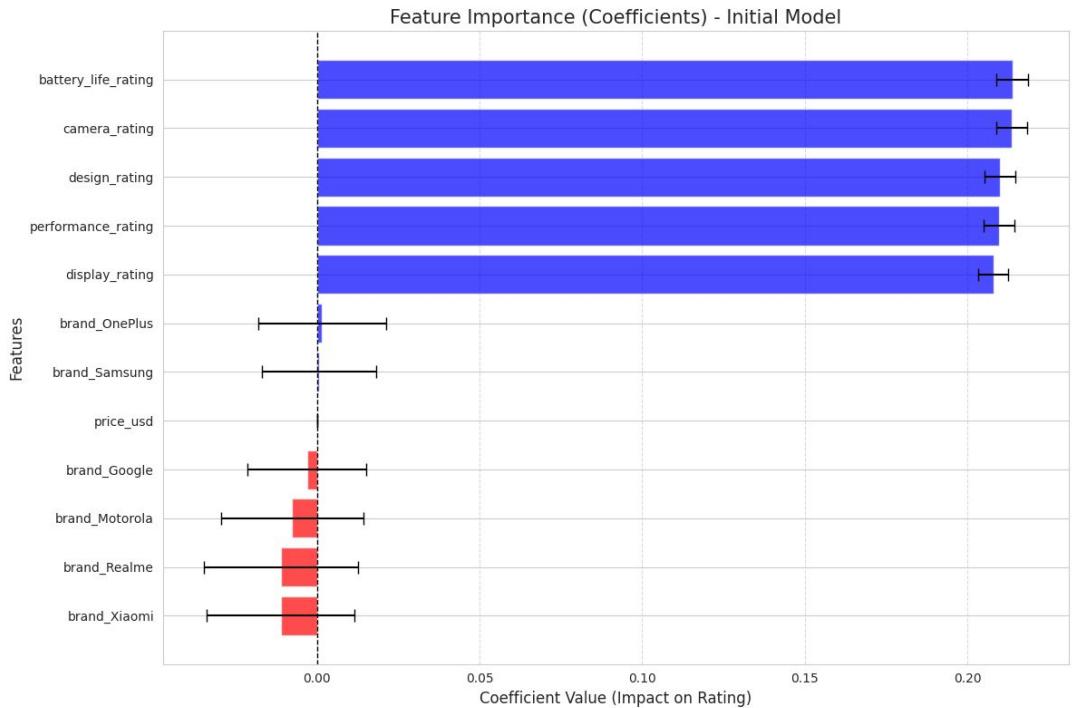


Brand & Price: Surprising Results

Brand name and price have little effect on customer satisfaction **after** accounting for the five key features.

High ratings are earned by performance – not prestige or price tag.

Even budget brands can achieve 5 stars by delivering on the essential performance drivers.



How Strong Is This Model?

86.6% accuracy

- Model predicts satisfaction with **86.6% accuracy**
 - Meets and exceeds the original 70% goal
 - Reliable focus for our R&D Investment

Limitations & Considerations

- Most top phones excel in all five areas – features tend to “move together”
- Hard to pinpoint a single “target” feature
- Known in statistics as “multicollinearity”

Recommended Actions

1. **Balanced, Don't Specialize:** Invest evenly in all five pillars – don't gamble everything on just one feature
2. **Focus Messaging:** Our marketing should spotlight tangible hardware strengths, not just brand identity.
3. **Budget Devices Matter:** High satisfaction isn't reserved from premium models; even our budget phones deserve attention on all five pillars

Expected Benefits: Projected Business Impact

- R&D resources focused on features customers truly value
- Millions in reduced waste by cutting non-essential feature costs
- Increase our chances of 5-star ratings
- Protect and grow our place in a fiercely competitive market

References

- Kaggle. (2025, October 22). Retrieved November 1, 2025, from
<https://www.kaggle.com/datasets/mohankrishnathalla/mobile-reviews-sentiment-and-specification/data>

Q&A

- Thank you for joining me today!
- I'm happy to clarify findings or discuss next steps