

**I Hate this Product!**  
**5 Stars!**

Reducing Rating Inflation Using NLP

# Agenda

- The Problem(s) with 5-Star Ratings
- Data Understanding
- Modeling Process
- Final Model Results
- Model Demo?
- Where Do We Go From Here?

# The Problem with Five-Star Ratings

Prone to grade inflation

No Incentive for Reviewers to be Truthful

Product Quality is Obscured

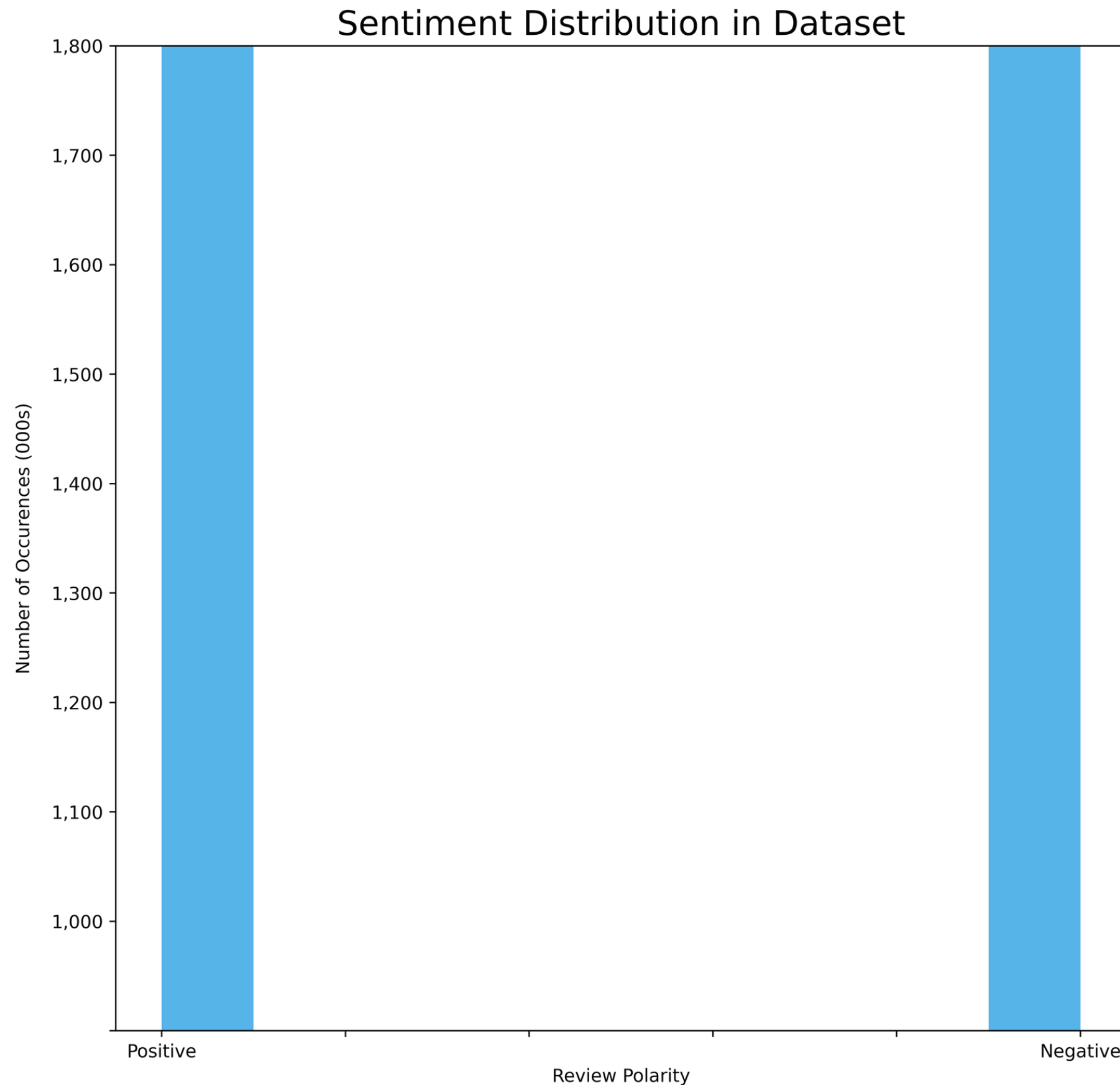
Product Reception is Murky

# Who Wants a Better System?

Online Marketplaces

Sellers

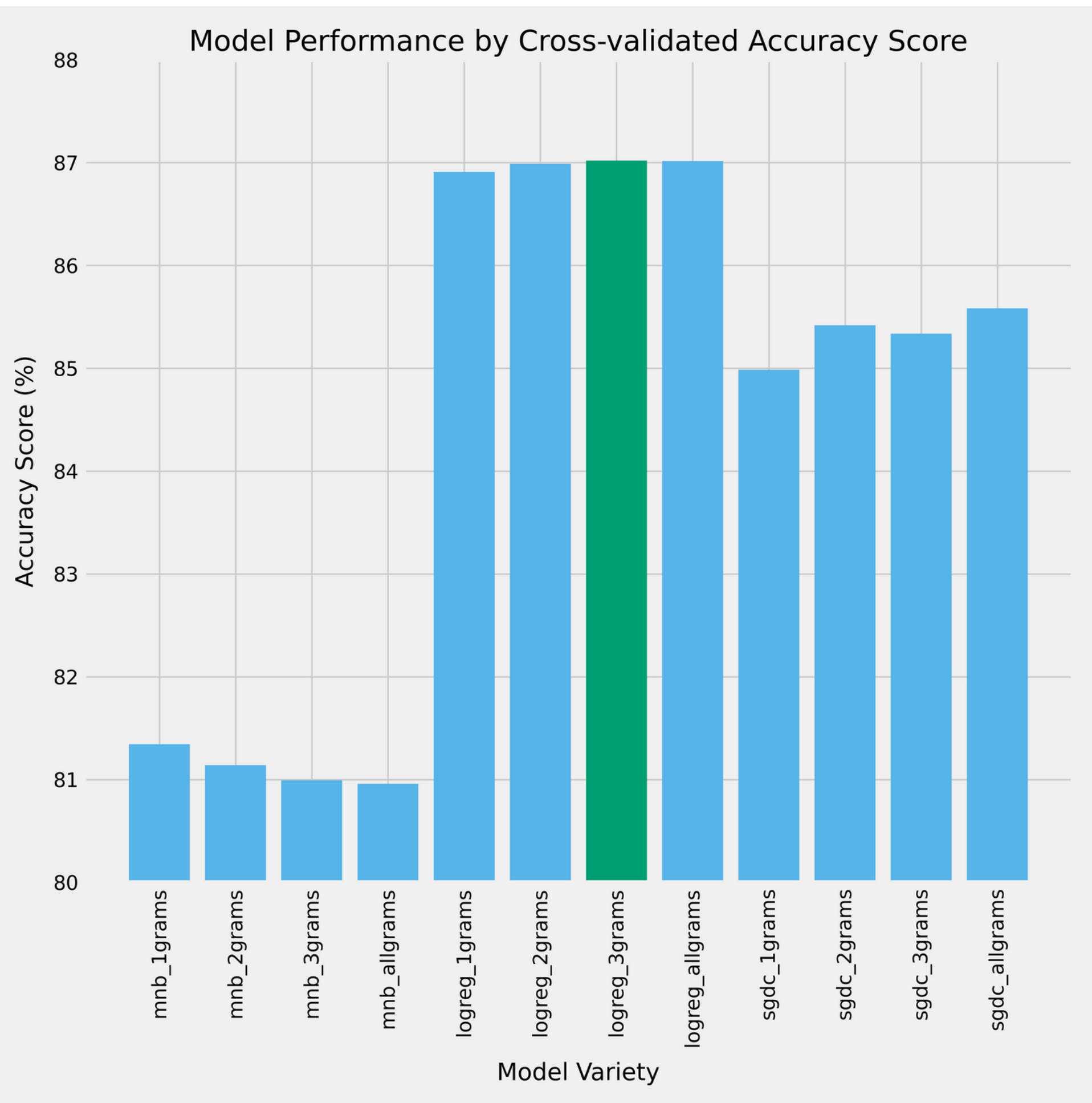
Consumers



# Getting to Know Our Data

- 3.6 million Amazon reviews
- Wide Variety of Products

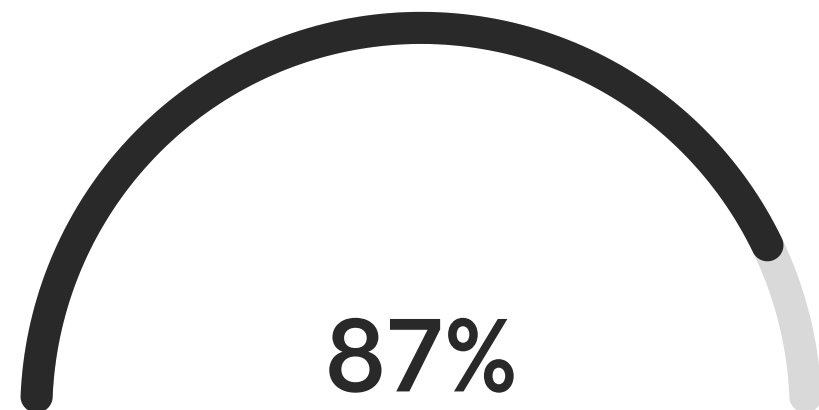
\*\*\*Placeholder Reminder to Beautify Graph



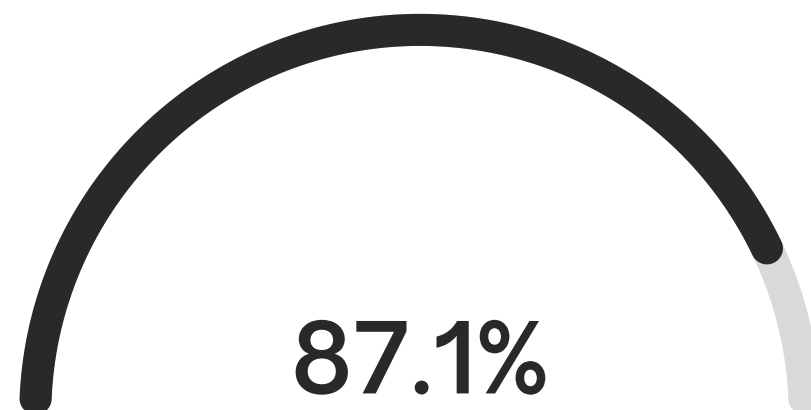
**Modeling  
Process  
\*\*\* Placeholder  
Reminder to  
Beautify  
Graph**

# Final Model Performance

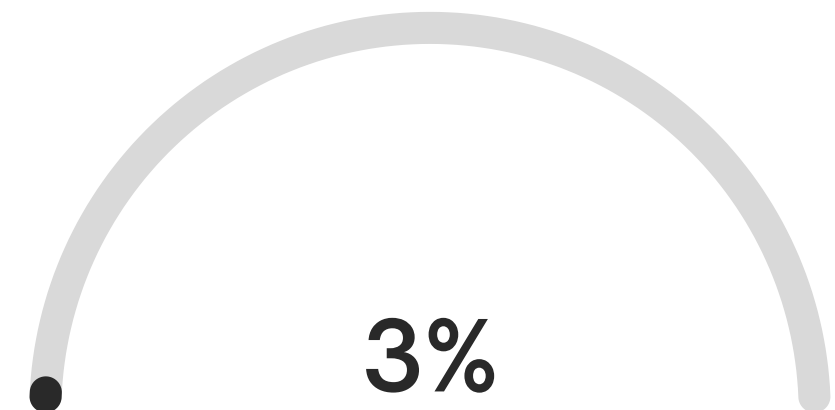
Training Data



Unseen Data



Reddit Data



\*\*\* Placeholder Reminder to note difference in performance on  
amazon/reddit/whatever data

**And Now a  
Quick  
Demonstration**



**Placeholder for  
Video Demo**

# Where Do We Go from Here?

Cloud Environment

Tune model  
hyperparameters

Web Application

Allow small sellers to  
upload ratings and  
download them classified

More Data

Other platforms,  
Other languages

Tom Chapman

**Thank you!**

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