



FASHION STYLE



Predicting Comment Sentiment

For Women's Fashion Brands

Jillian Clark

Agenda

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Problem

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02

Data Overview

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03

Final Model

...

04

Next Steps/Conclusion

...



Understanding the Problem



Triage Comments
to Appropriate
Response Team

...



Protect Brand's
Reputation

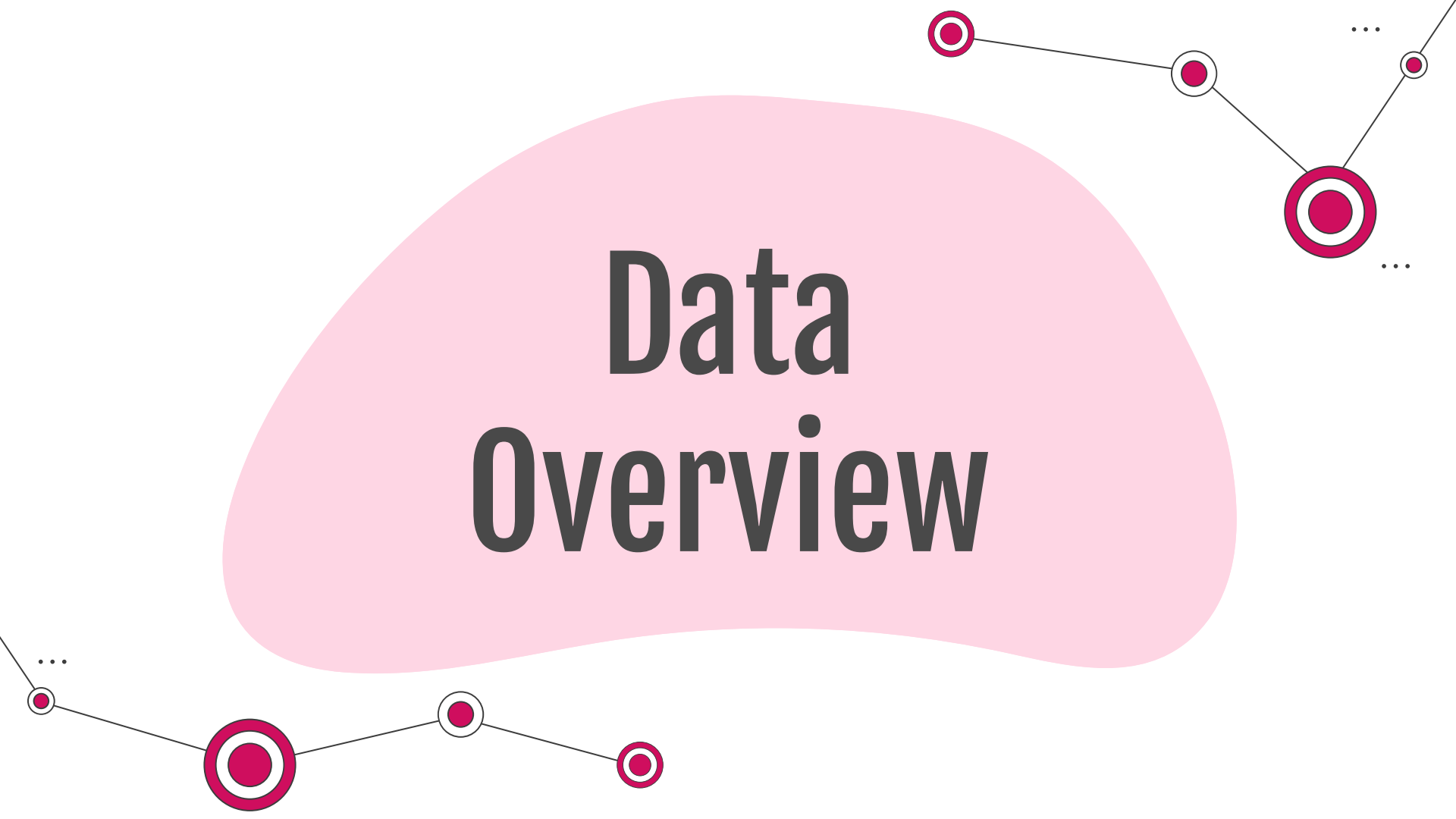
...



Improve
Customer Loyalty

...

Data Overview



Common Words in Reviews





23,486 Reviews

from a Women's E-Commerce Clothing brand

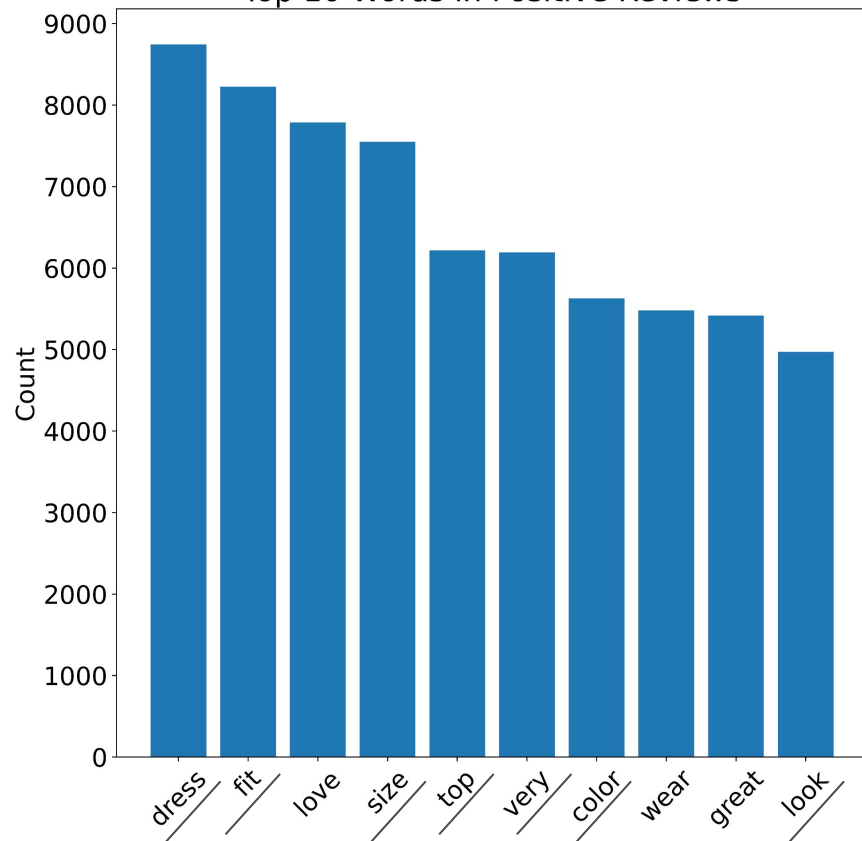
1,205 Clothing IDs

of unique products that were reviewed

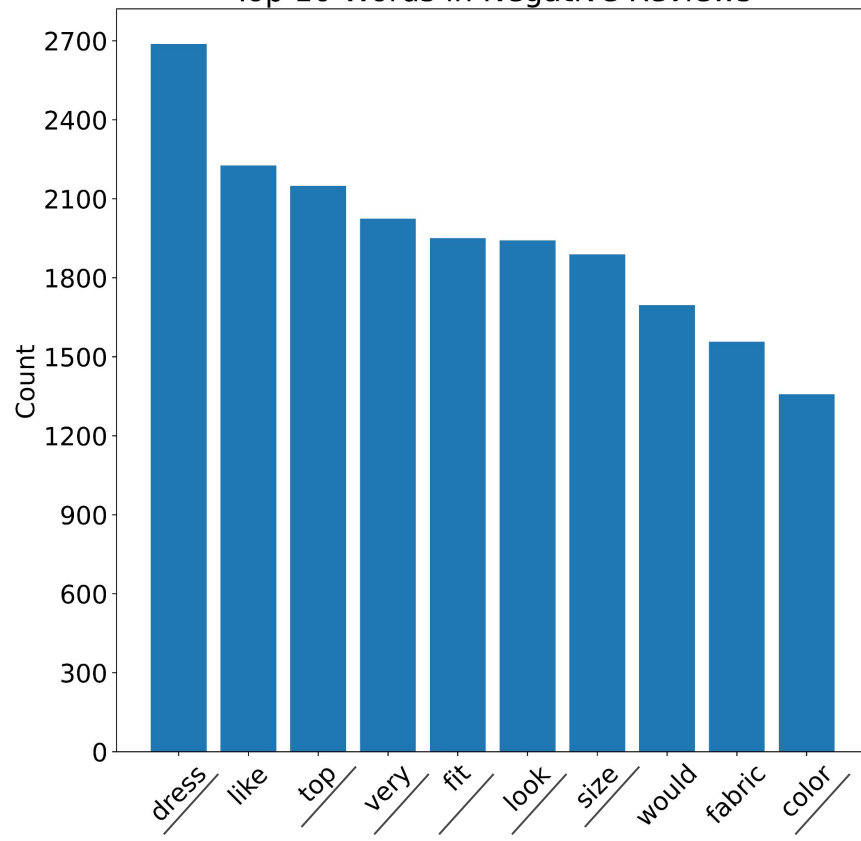
Rating Scale 1-5



Top 10 Words in Positive Reviews

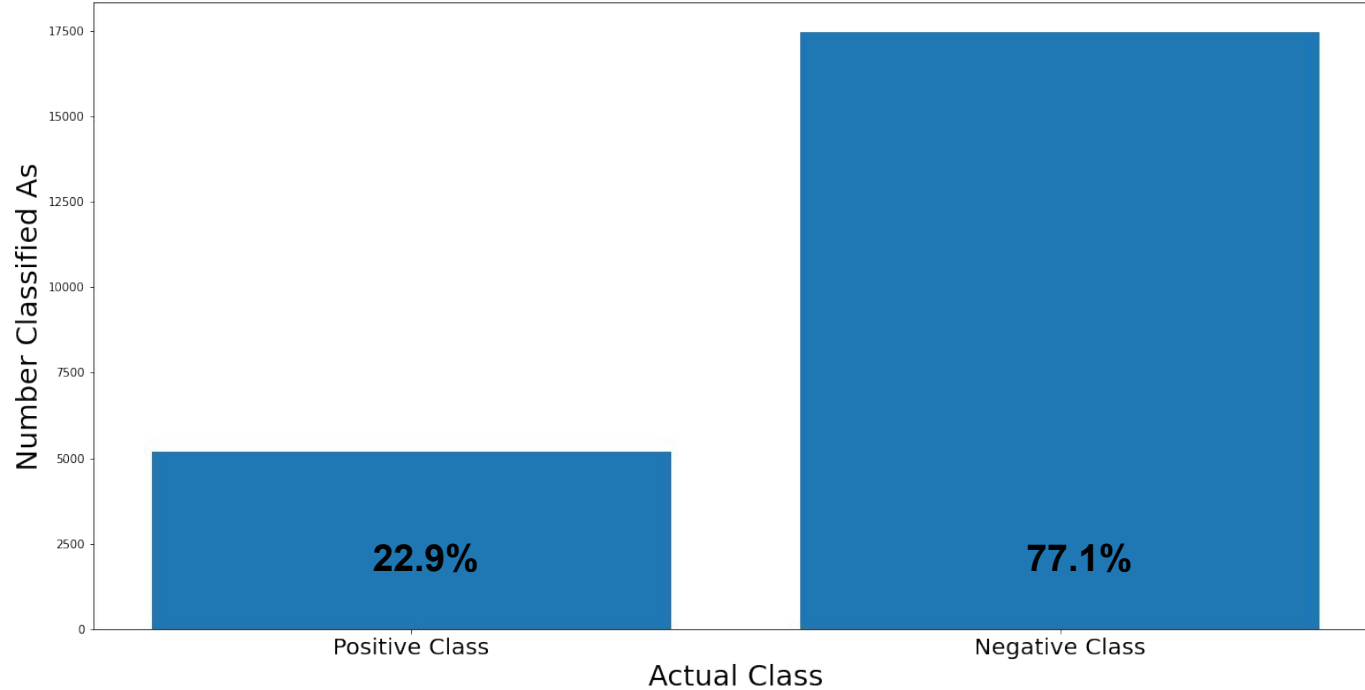


Top 10 Words in Negative Reviews



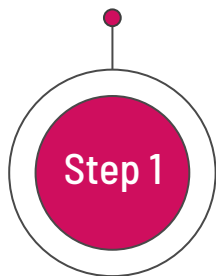
Target

Distribution of Reviews



The Process

Text Preprocessing



Step 2

Iterating through many
models with default
hyperparameters

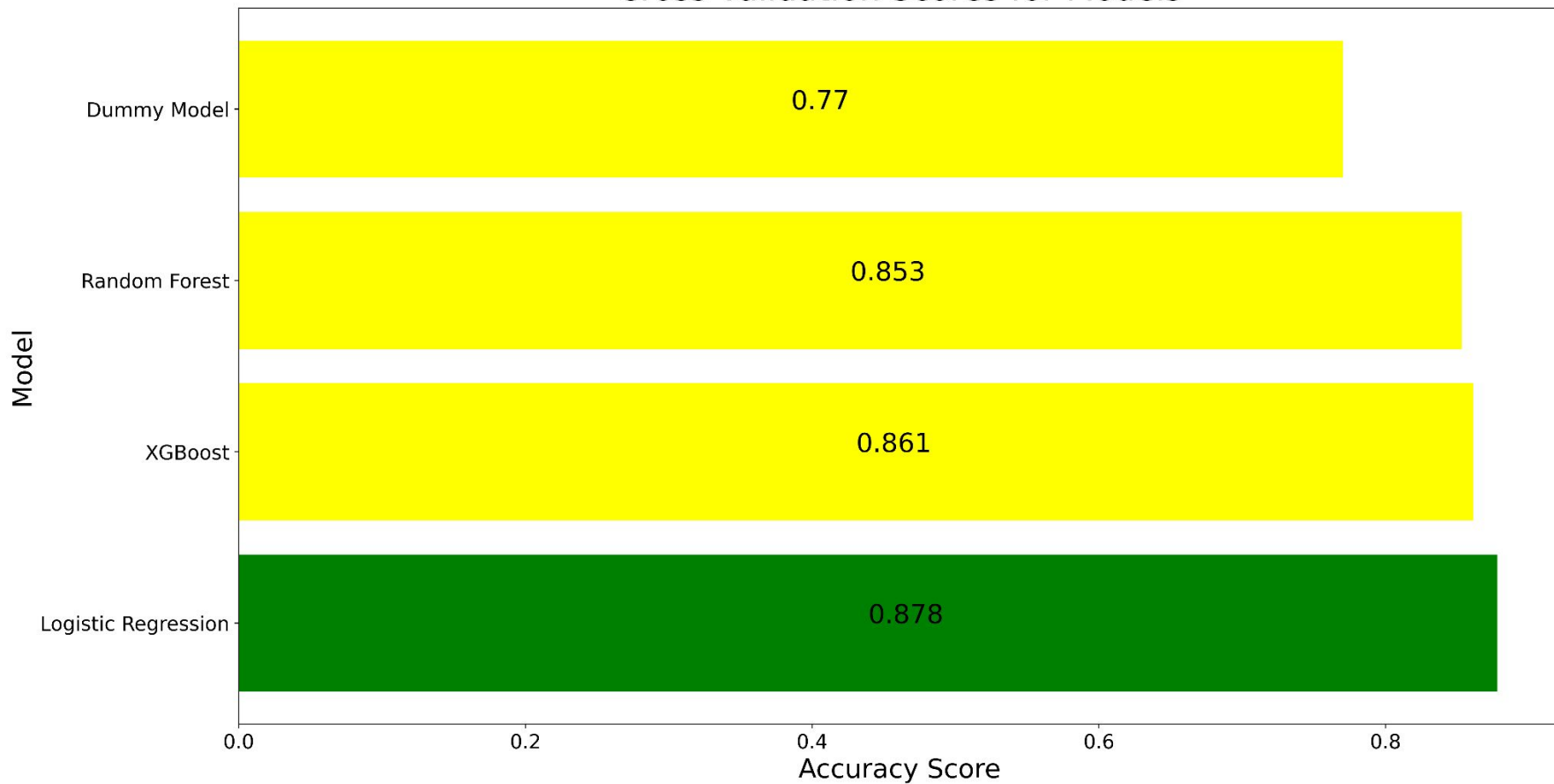
Tuning hyperparameters
for Logistic Regression,
XGBoost, Random Forest

Step 3

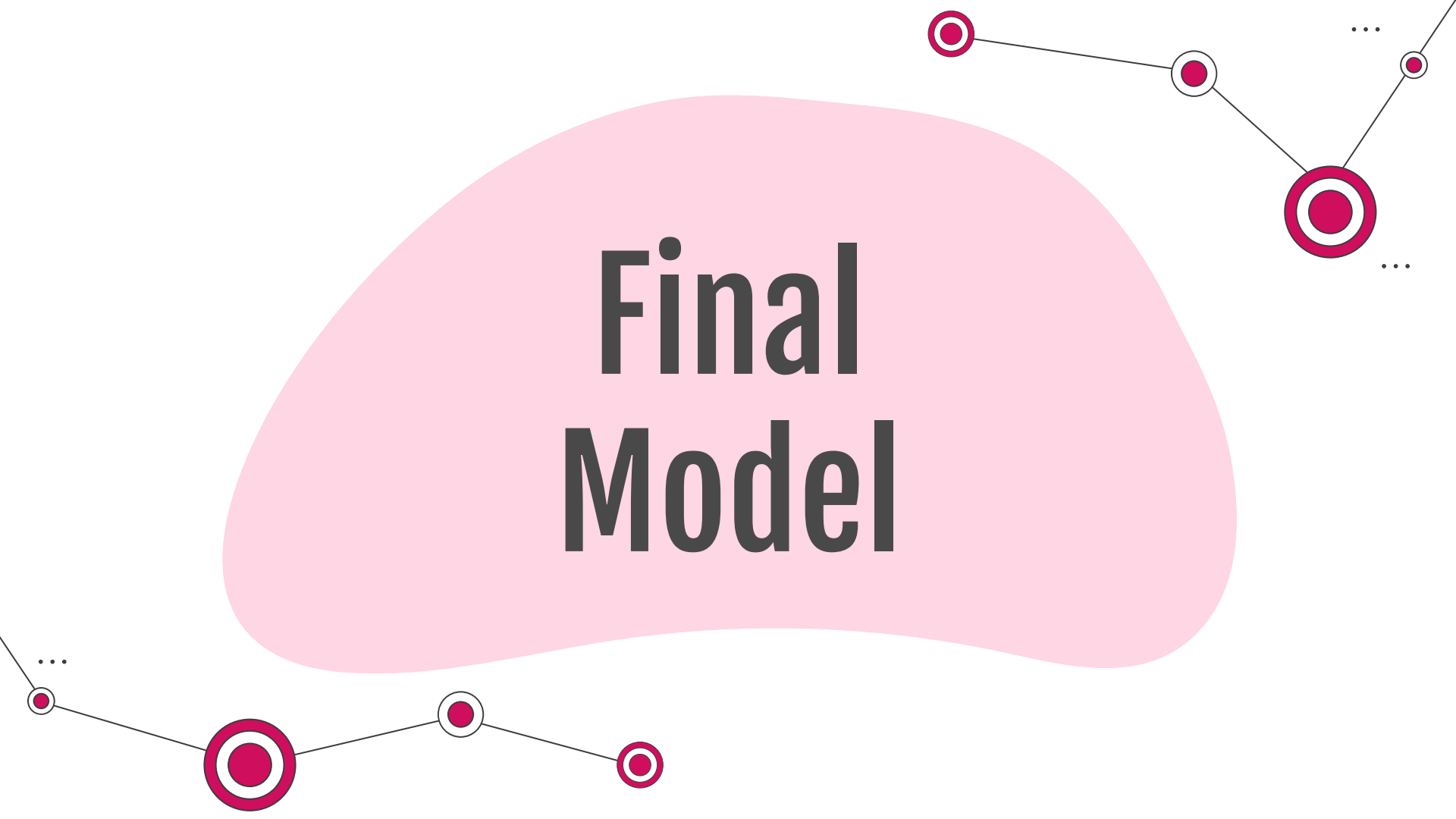
Step 4

Selecting best model
based on CV scores

Cross Validation Scores for Models

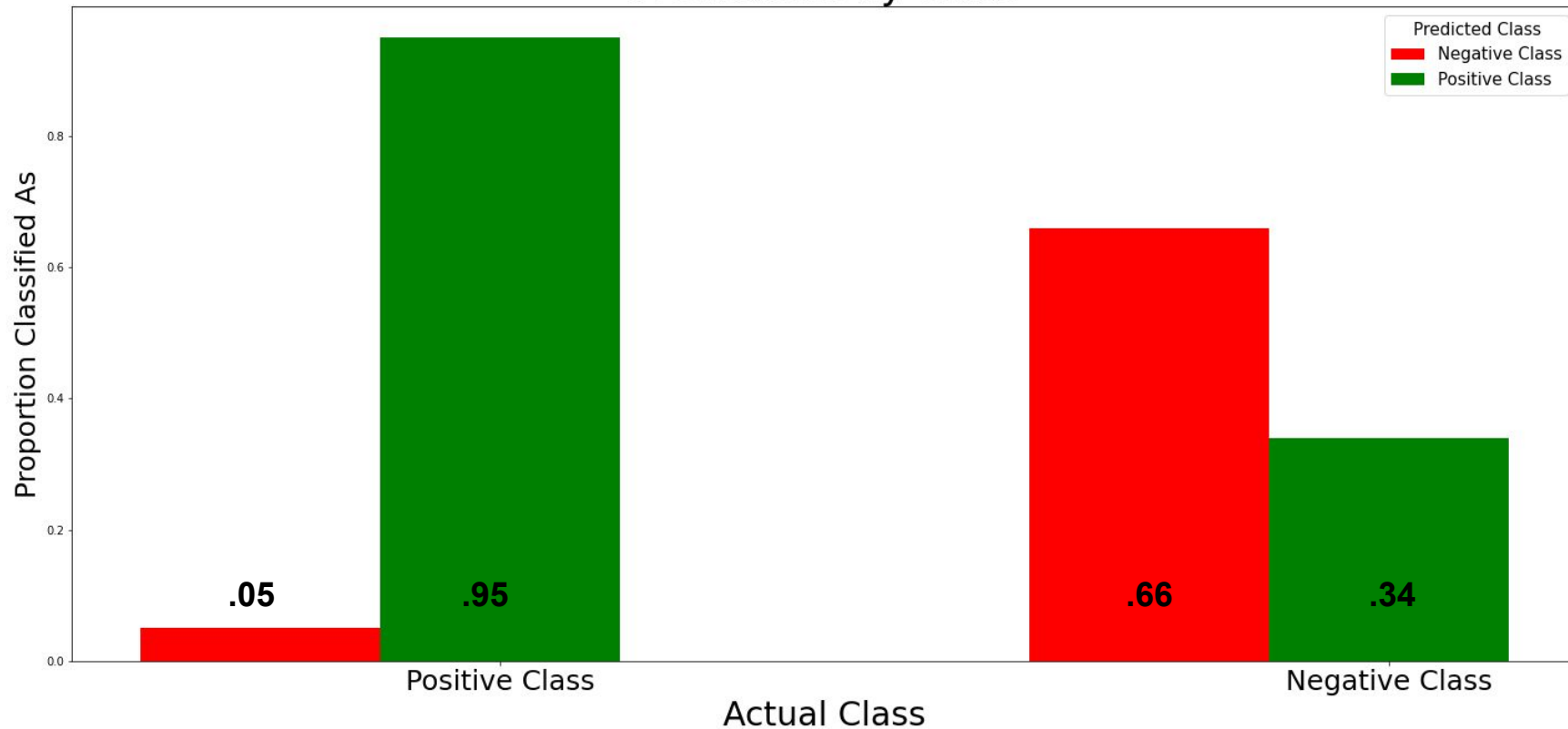


Final Model



Final Logistic Regression Model

Predictions by Class



Classifying New Comments

Positive Tweet

Tweet Predicted_Class

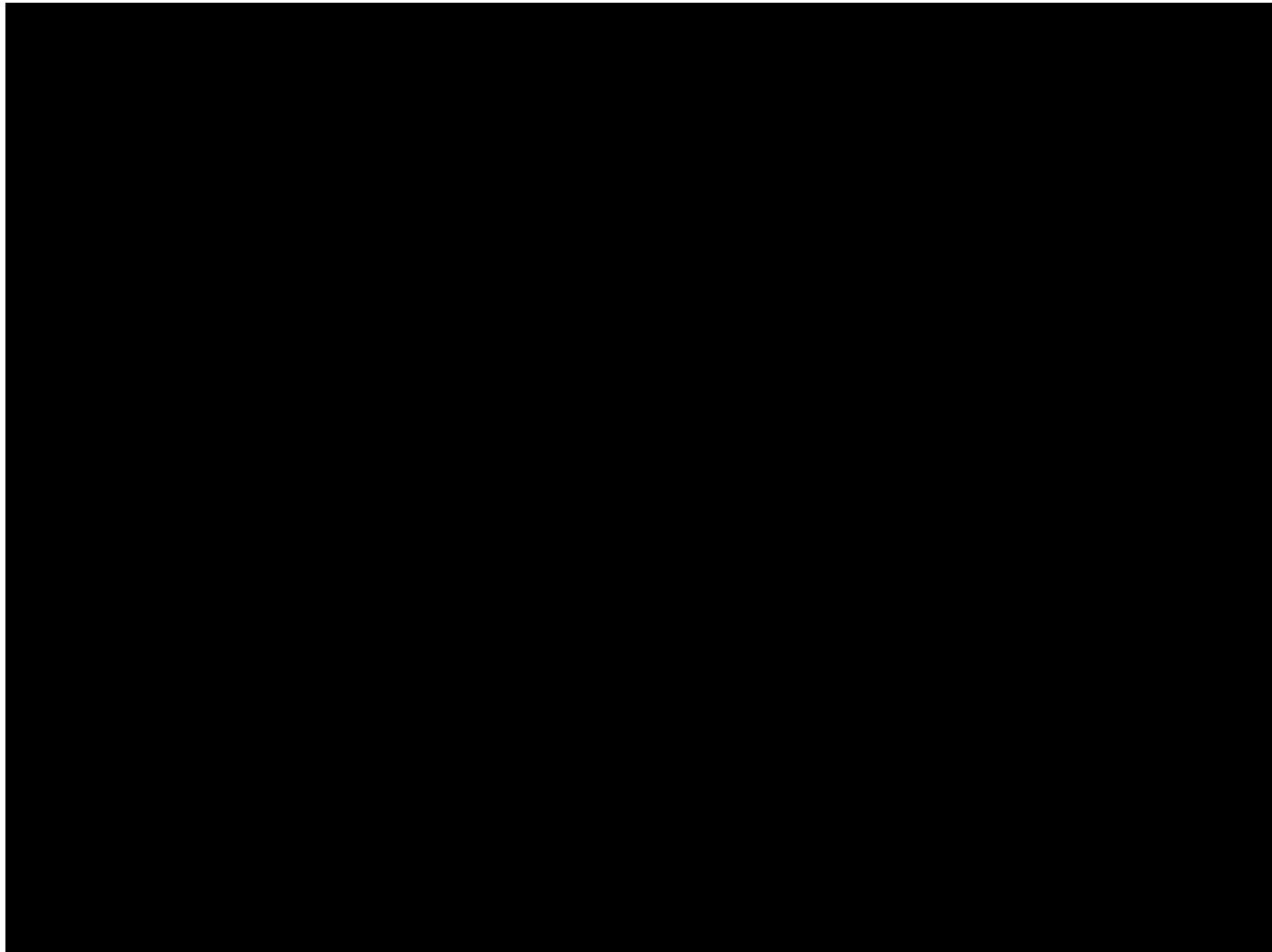
Queen B said it best 🍷✨ Dress is from @zara Heels @express Watch is @mvmtforher #grwmreel #fashionstyle #zaradress #pinkoutfit #goingoutoutfit #datenightoutfit <https://t.co/t0klk5Ofyi>

1

Negative Tweet

Disappointing service from @ZARA. \nOrdered a pair of trousers online and a pair of cargo pants showed up at my door 🙄. Same barcode, so clearly issues at warehousing process. \nPlease sort ASAP. <https://t.co/vMe4JIT5Hf>

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Limitations and Next Steps

- Class imbalance
- User error with initial ratings
- Create dual classification system-filter out spam first
- Add in “Neutral” classification
- Create custom stopwords list
- Test with more platforms (TikTok comments, blogs, etc.)
- Upgrade and deploy app to perform Twitter API calls based on user inputted query terms

Conclusion

- Model is generalizable to any platform
- Triage comments quickly
- Capitalize on “free” marketing
- Protect brand reputation with responses
- Improve customer loyalty

Thanks!

Do you have any questions?

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[Github](#)

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