

Salvatore Ferragamo



Cartier



FENDI



Moschino



D.P.

Prada

DOLCE & GABBANA



GIVENCHY



LOUIS VUITTON



Gauging Brand Perception: How Luxury Brands Can Stay One Step Ahead

BUSI 488-001: Synthetic Experts Team D

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Utiushev, and Tammy Duong



BENTLEY

Ferrari



VERSACE



Lamborghini



JAGUAR

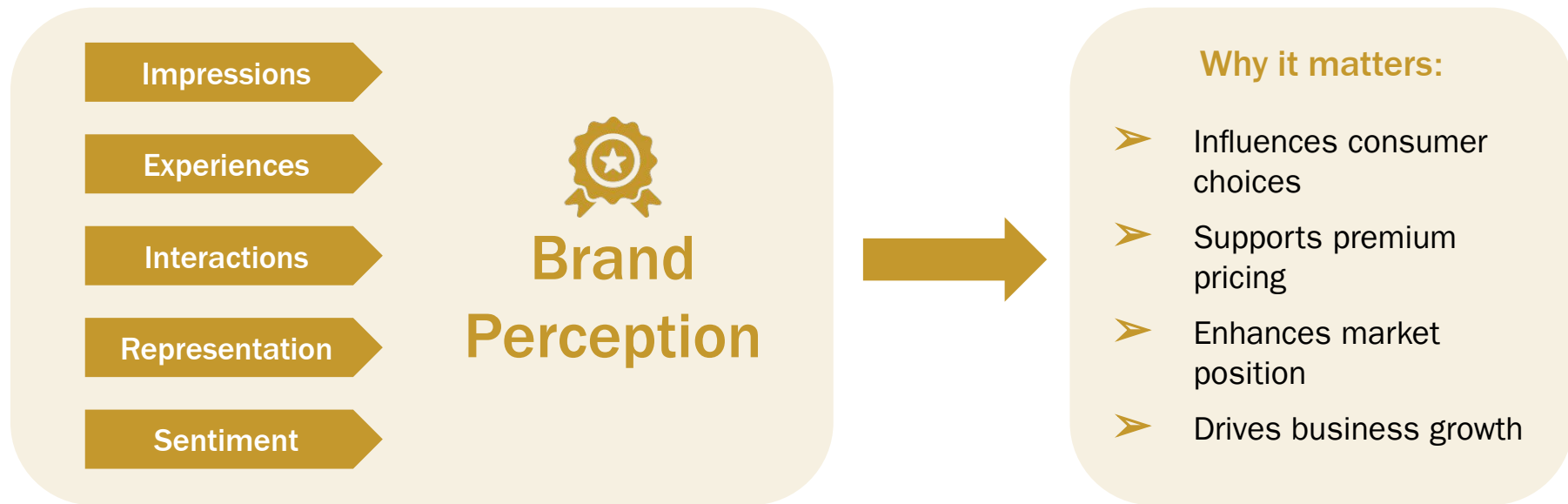
Harrods

MONT
BLANC

AZIMUT
YACHTS

BOSS
HUGO BOSS

Importance of Gauging Brand Perception



Source: Brandwatch



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The Pillars of Brand Perception



Stakeholder Theory

Corporate Social Responsibility

Source: Investopedia; Smartsheet



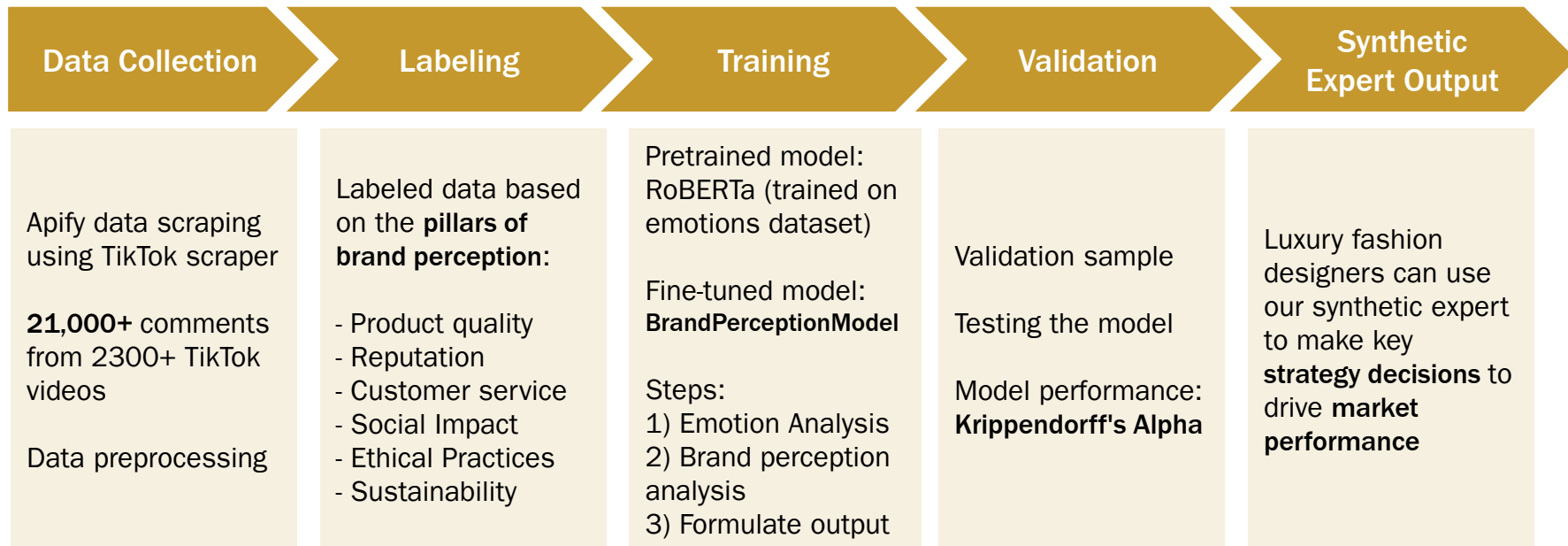
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Developing our Brand Perception Classifier



Data & Labeling

21,000+ comments collected

2,300+ TikTok videos scraped

Labels used:

- Product quality
- Brand Reputation and Heritage
- Customer Service
- Social Impact
- Ethical Practices
- Sustainability

@Ashley Danielle @Savannah Currier	7253147629269	wolfless067	https://www.tiktok.com/
https://www.tiktok.com/	Imagine if we later on find Balenciaga at Tj Max 🤔	6647844479263	k0_bella_ https://www.tiktok.com/
https://www.tiktok.com/	very soon all the homeless people would be dressed in Balenciaga 🤔🤔	6931872044570	122empreshele https://www.tiktok.com/
https://www.tiktok.com/	Proud to say I'm too poor to buy balenciaga 🤔	6743350664975	n.a.d.j.a3 https://www.tiktok.com/
https://www.tiktok.com/	Darling, if everyone sold their balenciagas for a couple cents they will be ruined. That way everyone could afford them and they will lose exclusivity	6782127426685	ivanadimitrova42 https://www.tiktok.com/
https://www.tiktok.com/	Rich people w balenciaga be like :	6949999021872	talklessk3 https://www.tiktok.com/
https://www.tiktok.com/	waiting to see Balenciaga in tjmaxx next	6717236874052	its_ashley757 https://www.tiktok.com/
https://www.tiktok.com/	And u took it right back out after the video 🤔 which is fine	6766808657230	riverisme14 https://www.tiktok.com/
https://www.tiktok.com/	Bruh why y'all growing that away just because balenciaga got cancelled doesn't mean u have to throw it away like u could have gave that to some ppl in	6940035587904	issjsmenia https://www.tiktok.com/
	people need to find out that balenciaga is also the owner of gucci		

Source: Apify TikTok scraper



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Model Training & Validation

Our Model:

RoBERTa emotion
pre-trained model



Brand perception
aspect classifier



BrandPerceptionModel

Training

- Loss function: Binary Cross-Entropy Loss for multi-label classification
- num_epochs = 5
- batch_size = 32
- learning_rate = 2e-5

Validation

- If given more time, would have used Krippendorff's alpha to validate our model

Source: `AutoModelForSequenceClassification.from_pretrained("SamLowe/roberta-base-go_emotions")`



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Model Output

Sample output format:

Overall Brand Perception:

- Product Quality: High (0.85)
- Customer Service: Average (0.55)
- Sustainability: Low (0.30)

Overall brand
perception score

Emotional Tone:

- Joy: Moderate (0.60)
- Disappointment: Low (0.20)
- Optimism: High (0.75)

Emotional tone score

Based on the analysis of customer reviews and social media mentions, the brand is highly regarded for its product quality, with many customers expressing satisfaction and joy. However, there are areas for improvement, particularly in customer service and sustainability practices, where sentiment is more mixed. Overall, the brand evokes a sense of optimism among its customers, but there is room for enhancing certain aspects to further strengthen its perception.

Scores generated
based on emotion
analysis from
pretrained model
and brand
perception analysis
from the added
layer

Text generated
based on summary
of brand perception
found in Tiktok
comments

Our brand perception
synthetic expert
delivers **actionable
output** to inform
marketing strategies
of luxury fashion
designers



Risks and Mitigations

Limited Data Sources

Limitations

Using only TikTok data (44% of fashion brands)

Mitigations

Easy to replicate analysis with other social media data

Lack of Details

Limitations

Our model can not pinpoint to specific comment topic (good or bad)

Mitigations

We can identify comments for brand improvements

Low Precision

Limitations

Our model gives many false positives (precision is 78%)

Mitigations

It can be mitigated by changing the classification model

Source: [Statista](#), [Confusion Model](#)



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Costs of gauging brand perception

Price of Market Research

\$15,000 - \$50,000

- One time custom project
- Takes 6-7 weeks gather data and insights
- Results outdated by the time insights are created



Costs of Our Model

\$443 a month

- Outputs results anytime and can run model any number of times
- Takes **1-2 hours** to scrape data and run the model
- Results immediate and up-to-date

Source: Dekainsight, The Farnsworth Group



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How can luxury brands use our model

Reactions

Constantly know how the public gauges your brand and competitors

Be able to respond effectively to start trends

Trends

Evaluate trends and how successfully brand campaigns are

Maintain and grow your competitive edge

Plan

Develop marketing strategies that effectively capture the public

Be proactive rather than just reactive

When consumers feel connected to a brand, **57%** will increase their spending on products from that brand and **76%** will choose them over a competitor

Source: Brandwatch, Sprout Social



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Appendix

Utilizing TikTok to gauge brand perception

Brands we used to train our model

Score Calculations

Breakdown of model costs



Utilizing TikTok to gauge brand perception

With **1.52 billion users** TikTok is the top platform for luxury fashion brands, who live stream fashion shows and sell their latest products on the platform.



Instagram

- Has more confirmed users
- “2 weeks” behind on trends
- Difficult to scrape data



TikTok

- User numbers potentially higher
- Up to date with trends
- Premier platform in China, the fastest growing luxury market

Source: Vogue, G&M Fashion, World Population Review, LA times



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Brands we used to train our model

- therow
- courreges
- khaite
- chromehearts
- alaïa
- bottegavenetta
- versace
- balenciaga
- gucci
- fendi
- prada
- valentino
- chanel
- louisvuitton
- ysl
- christiandior
- cartier
- celine
- burberry
- rickowens
- givenchy
- hermes
- armani

We chose these 23 high fashion brands because they are some of the largest in the world by brand value while still falling in the luxury market.

We also included a few smaller, niche fashion brands that have a large social media following on TikTok.

For our clients, we can always add their brands and retrain our model based on their data.

Source: Fashion United, TikTok



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Score calculations

Text Review	Customer Service	Product Quality	Sustainability
"The customer service was excellent."	1	0	0
"The product quality exceeded my expectations."	0	1	0
"This brand is committed to sustainability."	0	0	1
"I love their products, but the service was poor."	1	1	0
"Their commitment to sustainability is lacking."	0	0	1

Our data frame measures the overall brand perception score and emotional tone score on a binary basis

1's = comment talks about that subject ex) mentions quality

0's = comment does not talk about that subject ex) does not mention sustainability



Breakdown of model costs

Actor	Results	Time	Costs
TikTok Data Extractor	2,300 Results	4 minutes 13 seconds	\$9.20
<u>TikTok Comments Scraper</u>	21,136 Results	1 hour 13 minutes	\$2.46 + \$20 a month
Synthetic Expert	Analyzed 21,136 comments	5-10 minutes	\$2 running API costs
Total	44,572 Results Gathered and Analyzed	Approximately 1 hour 22-27 minutes	\$13.66 one run + \$10 a month

If ran every day for a month (31 days) = $\$13.66 \times 31 + \$10 =$ **\$443.46 a month**

Source: Apify



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Confusion Matrix on the first 100 comments

	Actual Positive	Actual Negative
Predicted Positive	40	38
Predicted Negative	15	7

Source: Apify



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