

IS Project Experience (BA)

Mid-term Review

S'eeReal x L'OREAL

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Ong Qian Ling | Tan Sok Yi | Teng Jing Wen



01. PROJECT MANAGEMENT

Introduction, Milestones, Meeting Minutes, Change Management

02. TECHNICAL DETAILS

Architecture, Models, Data Challenges, User Testing

03. PRODUCT DEMO

Demonstration of visualisation dashboards

04. NEXT STEPS

Schedule plans after mid-term

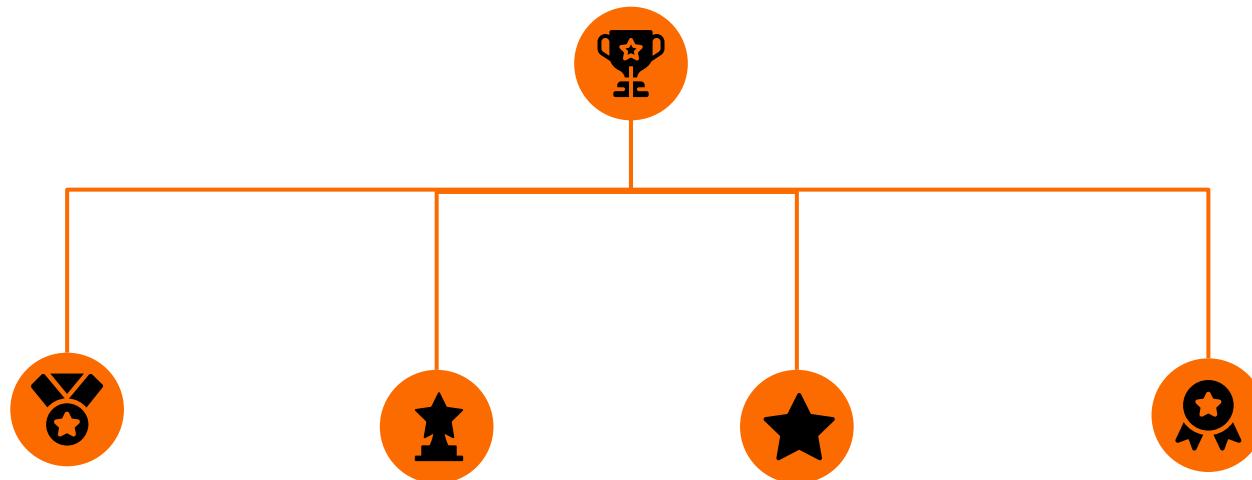


01

PROJECT MANAGEMENT

Analytics dashboard to identify problems and understand customer sentiments to facilitate better decision making

Deliverables



Sentiment Analysis

Topic Analysis

Rating Analysis

Question(FAQ) Analysis

Project Management

Technical Details

Product Demo

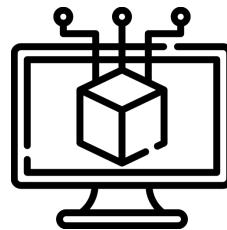
Next Steps

TEAM ROLES



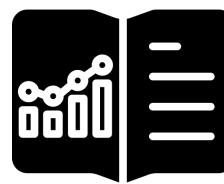
Qian Ling

Project Manager,
Quality Assurance



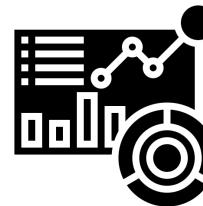
Sok Yi

Data Engineer



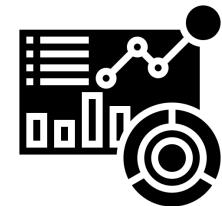
Rachel

Data Engineer/
Business Analyst



Anne

Data Visualisation
Specialist



Jing Wen

Data Visualisation
Specialist

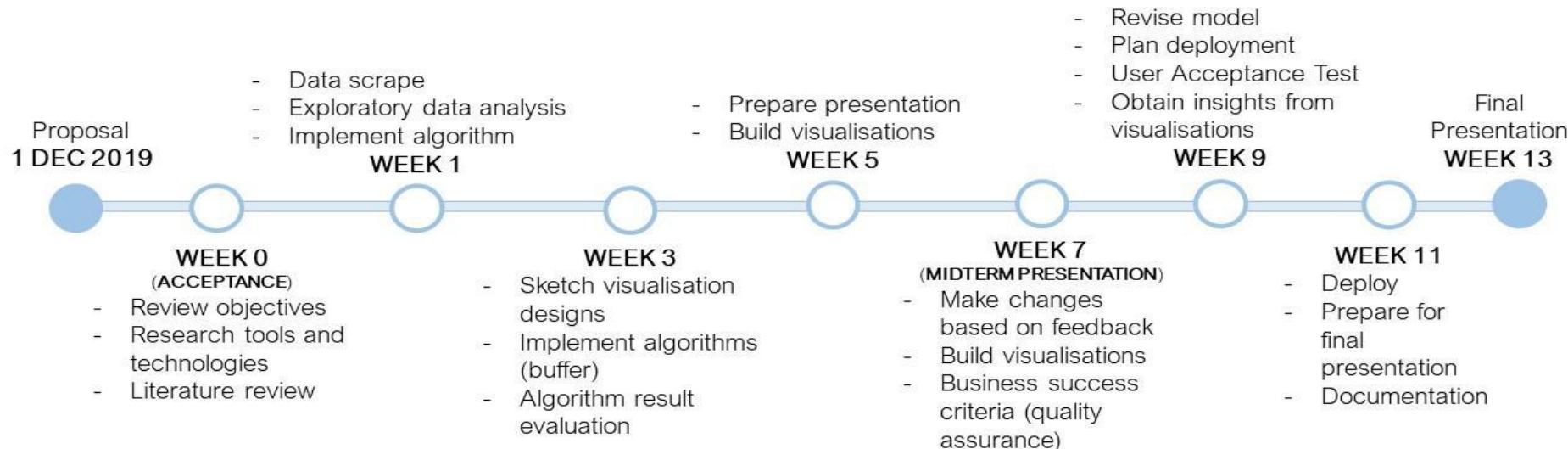
Project Management

Technical Details

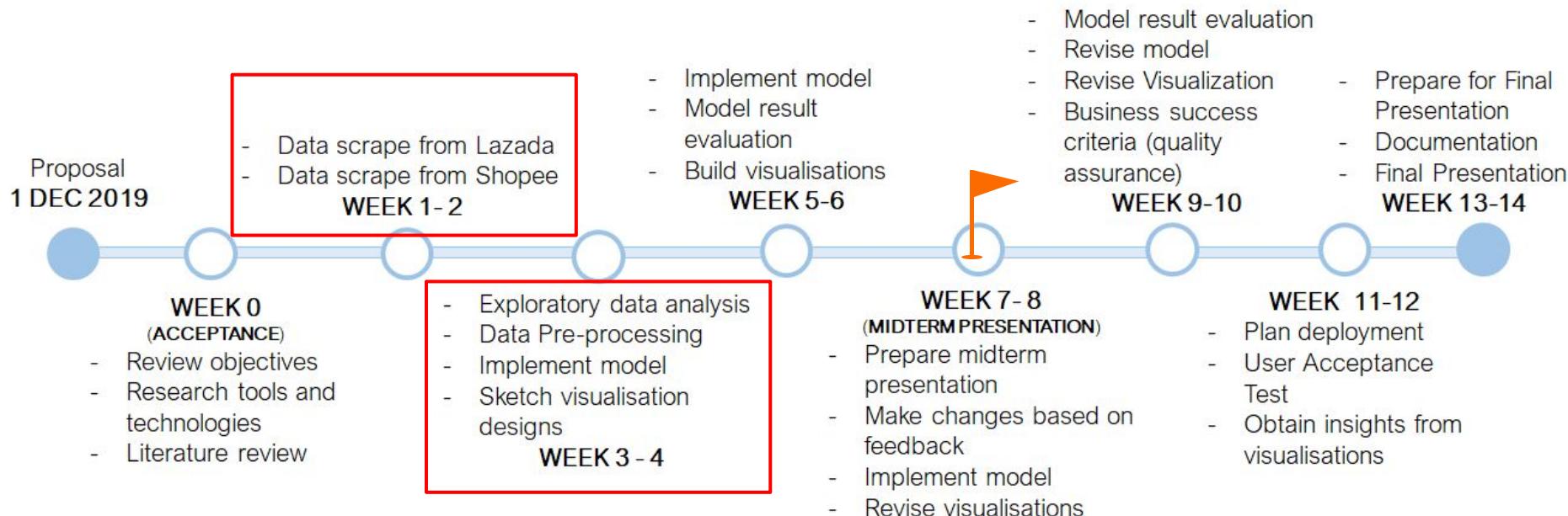
Product Demo

Next Steps

PLANNED MILESTONES



ACTUAL MILESTONES



PLANNED VS ACTUAL MILESTONES

Changes/Issues



Extended time spent on Data Scraping due to lack of expertise



Pushed back EDA due to delay in Data Scraping



Extended time for model development

Planned

- Data Scrape
 - Exploratory Data Analysis
 - Implement Algorithm
- WEEK 1

Actual

- Data Scrape from Lazada
 - Data Scrape from Shopee
- WEEK 1 - 2

Planned

- Data Scrape
- Exploratory Data Analysis
- Implement Algorithm

WEEK 1

Actual

- Exploratory Data Analysis
 - Data Pre-Processing
 - Implement Model
 - Sketch Visualisation Design
- WEEK 3 - 4

Planned

- Implement Algorithm

WEEKS 1 - 4

Actual

- Implement Model (and accuracy improvement)
- WEEK 3 - 7

MEETING MINUTES (SPONSOR)

Date	Agenda
20 Jan 2020 (online)	<ul style="list-style-type: none">● Project progress update● Additional requirements (model, visualisation)● Fixture of bi-weekly online meetings + other deliverables
29 Jan 2020 (on-site)	<ul style="list-style-type: none">● Discussion on low-fi visualisation prototype with staff from data and digital e-commerce team● Feedback + additional requirements (visualisation)
14 Feb 2020 (online)	<ul style="list-style-type: none">● User testing on high-fi visualisation prototype● Obtain feedback on prototype



Meeting minutes

MEETING MINUTES (SUPERVISOR)

Date	Agenda
13 Jan 2020	<ul style="list-style-type: none">• Project timeline update• Fixture of meetings with project supervisor (Prof. Lo)
31 Jan 2020	<ul style="list-style-type: none">• Project progress update (data cleaning and visualisation sketches)• Feedback (visualisation, model building, suggested scope)
13 Feb 2020	<ul style="list-style-type: none">• Project progress update (data cleaning, visualisation sketches, model building)• Feedback (dashboard prototype, model building)• Mid-term brief



Meeting minutes

CHANGE MANAGEMENT

Change #	Type of change	Description	Impact	Outcome
1	<p>Additional requirements</p> <ul style="list-style-type: none">- Competitor Analysis <p>Request by: Sponsor</p>	<p>Replace questions analysis with competitor Analysis:</p> <ul style="list-style-type: none">- Include sentiment analysis and price comparison <p>Request made by sponsor after conducting online discussion</p>	High	Work on the requirement after mid-term review.

Change #	Type of change	Description	Impact	Outcome
2	Implement changes from User Feedback (UF) 1 Request by: Sponsor	<p>Changes:</p> <ul style="list-style-type: none">• Analyse response rate vs number of reviews• Day/Time matrix analysis (to identify peaks in review posted)• Include additional filters <p>Request made by sponsor after conducting UF 1 - improvement on the low fi UI.</p>	Medium	Changes have been applied accordingly and ready for product demo during mid-term review.

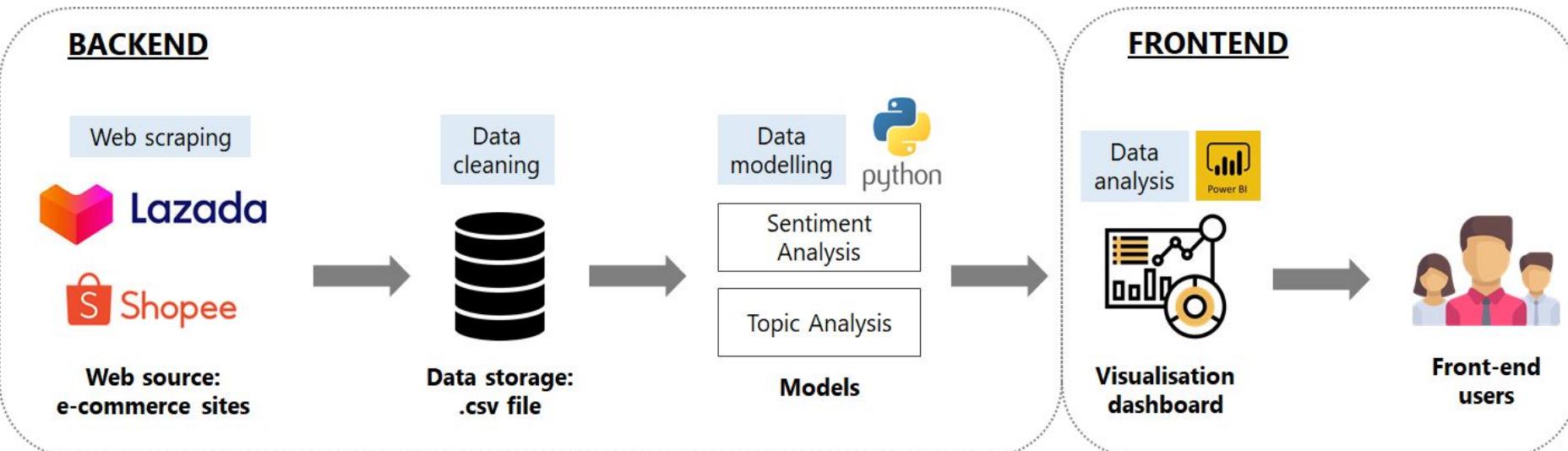
Change #	Type of change	Description	Impact	Outcome
3	Implement changes from User Feedback (UF) 2 Request by: Sponsor	<p>Changes:</p> <ul style="list-style-type: none">• Display monthly % change in positive/negative reviews• Realignment of dashboard (including filters)• Remove word cloud visualisations <p>Request made by sponsor after conducting UF 2 - improvement on the UI.</p>	Low	Changes have been applied accordingly and ready for product demo during mid-term review.



02

TECHNICAL DETAILS

ARCHITECTURE DIAGRAM

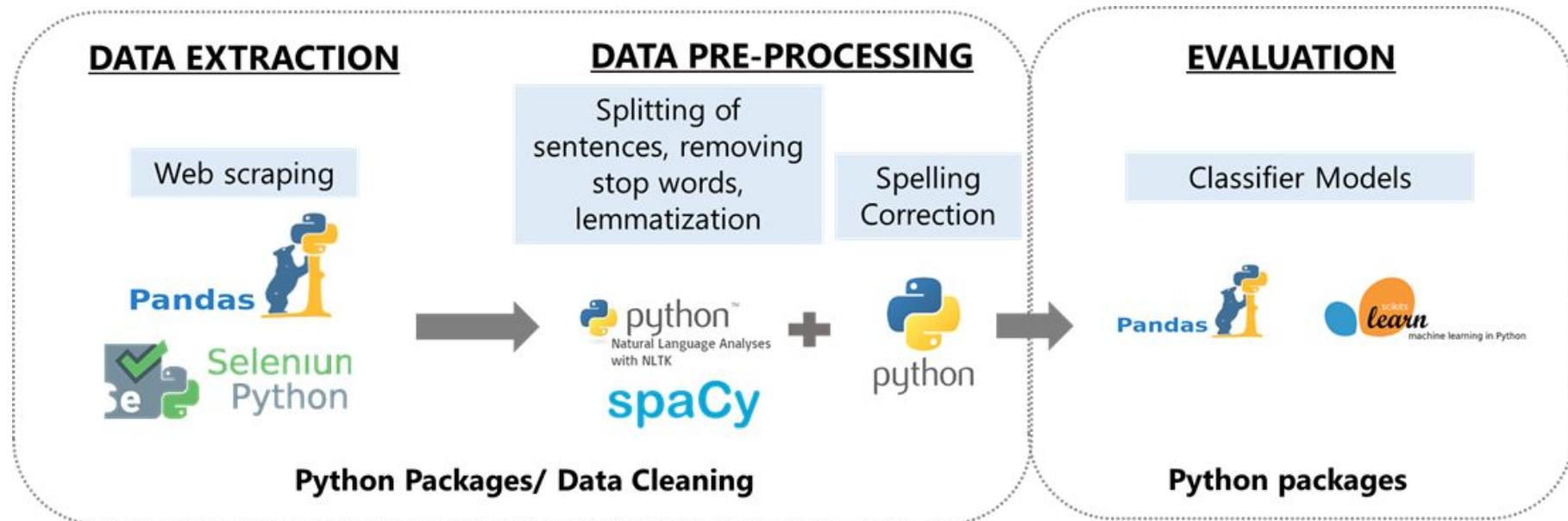




02

TECHNICAL DETAILS - BACK END

SENTIMENT ANALYSIS

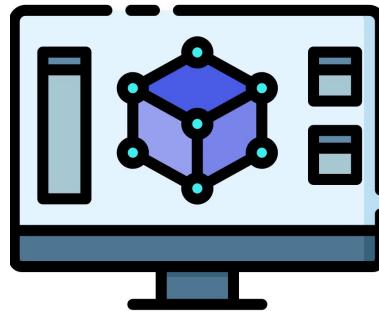


Legend:

Process

Sentiment Analysis		
	Algorithm used	F1 score (in %)
Multinomial Naive Bayes (Base Model)	With TF-IDF (use_IDF = True)	73.5
	With Count Vector	74.4
Bernoulli Naive Bayes	With TF-IDF (use_IDF = True)	78.1
	With Count Vector	78.1
Logistic Regression	With TF-IDF (use_IDF = True)	81.8
	With Count Vector	84.4

CHALLENGES

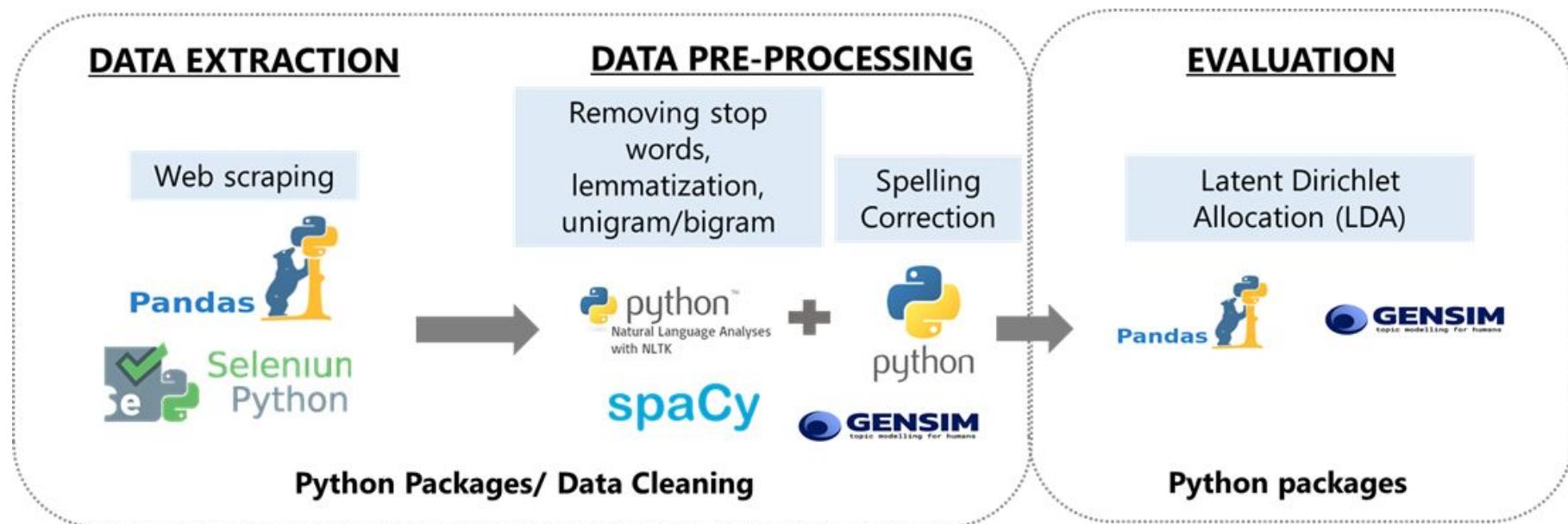


Handling multiple sentiment in a review



Identify Emoji

TOPIC ANALYSIS



Legend:

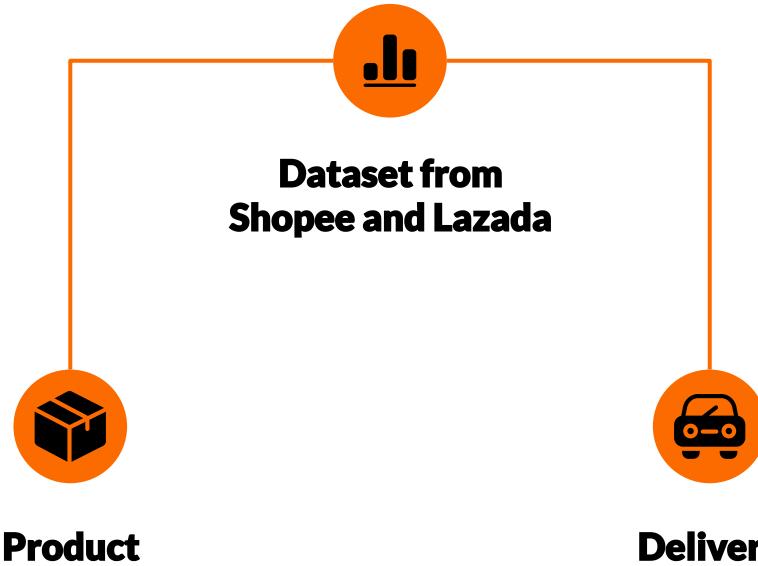
Process

MODEL EVALUATION

Topic Analysis		
Algorithm used	Perplexity Score	Coherence Score
Latent Dirichlet Allocation	-6.152	0.474
Latent Dirichlet Allocation - Mallet	-6.656	0.479

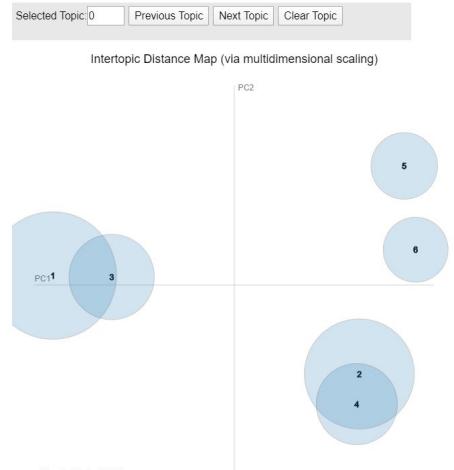
MODEL RESULT

Product	Make
Skin	Water
Love	Day
Makeup	Dry
Face	Foundation



Good	Item
Delivery	Hair
Fast	Free
Received	Buy
condition	Time

CHALLENGES



Overlapped topics



**Difficulty in identifying
the topics**



03

TECHNICAL DETAILS - FRONT END

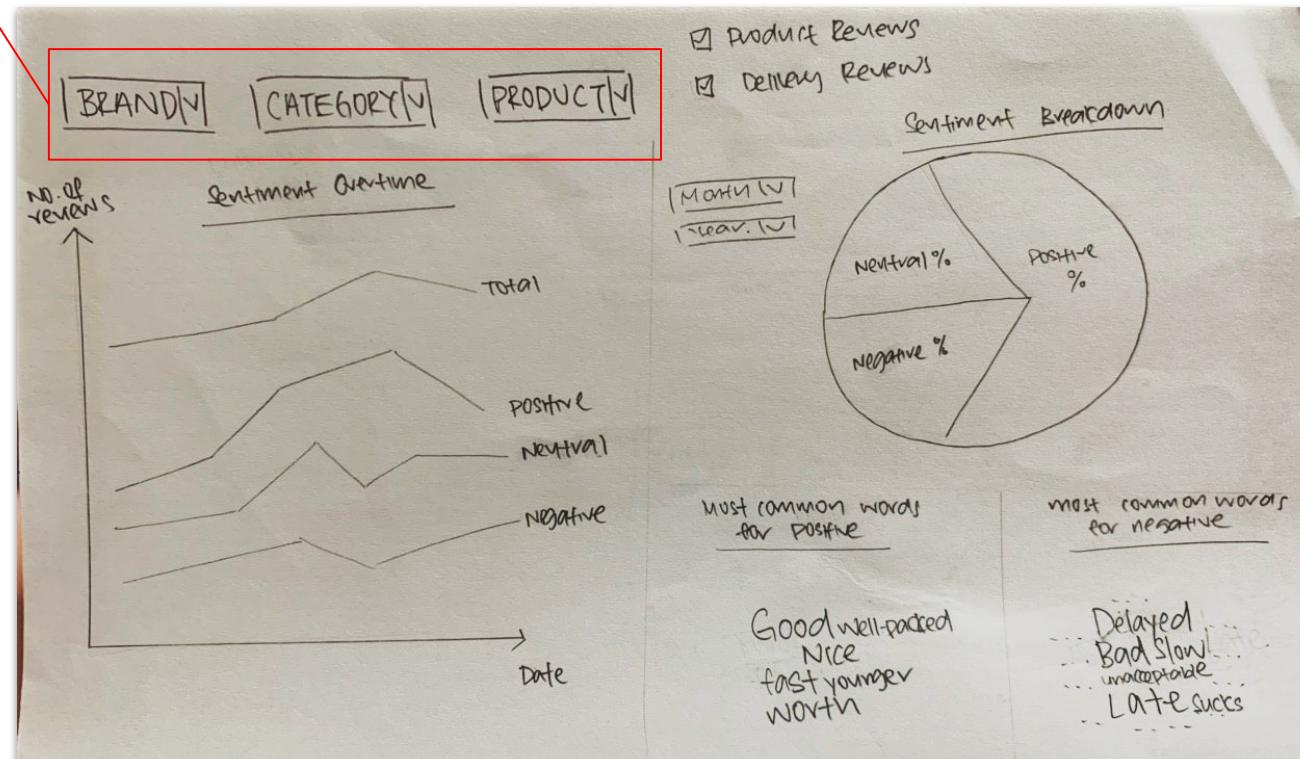
Feedback #1:

Include filter for date

Feedback #2:

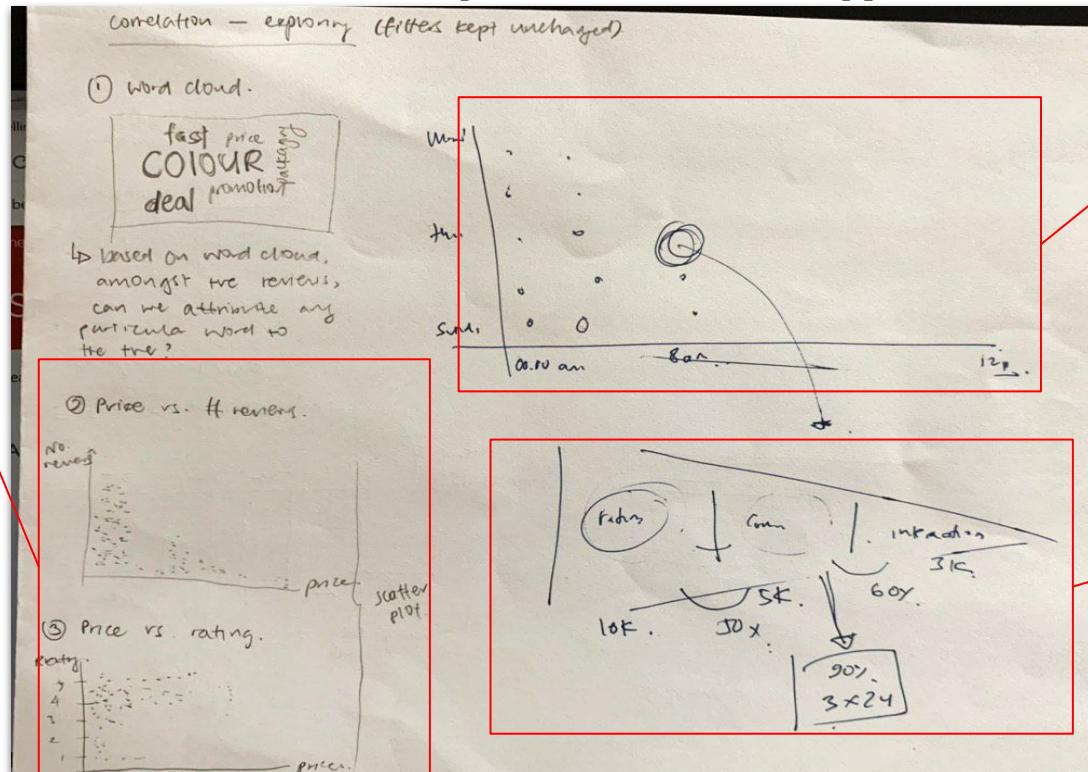
Include filter for KPIs/business metrics (e.g. response rate, ratings)

Low Fidelity Dashboard Prototype



Low Fidelity Dashboard Prototype

Feedback #3:
Identify correlation between ratings and sentiments



Feedback #4:
Identify hourly spikes in review within the week

Feedback #5:
Funnel approach to determine proportion of orders reviewed, and response rate

USER FEEDBACK 1

UF Round	Feedback/Changes	Completion
1	Include filter for date (by month/year)	Completed
	Consider more business metrics on dashboard (e.g. response rate)	Completed (added percentage change in reviews, response rate, average ratings)
	Include graph to identify correlation between ratings and sentiments	Completed
	Identify hourly spikes in reviews within the week	Completed (not applicable for data on Lazada)
	Include a funnel to show proportion of reviews vs. responses	Completed

Feedback #1:

Display it by monthly percentage change

**Review Response Rate****Power BI Dashboard using Prototype data (Page 1)**

0.78

PERCENTAGE OF POSITIVE

0.09

PERCENTAGE OF NEGATIVE

4.75

Average of Ratings

0.02

RESPONSE RATE

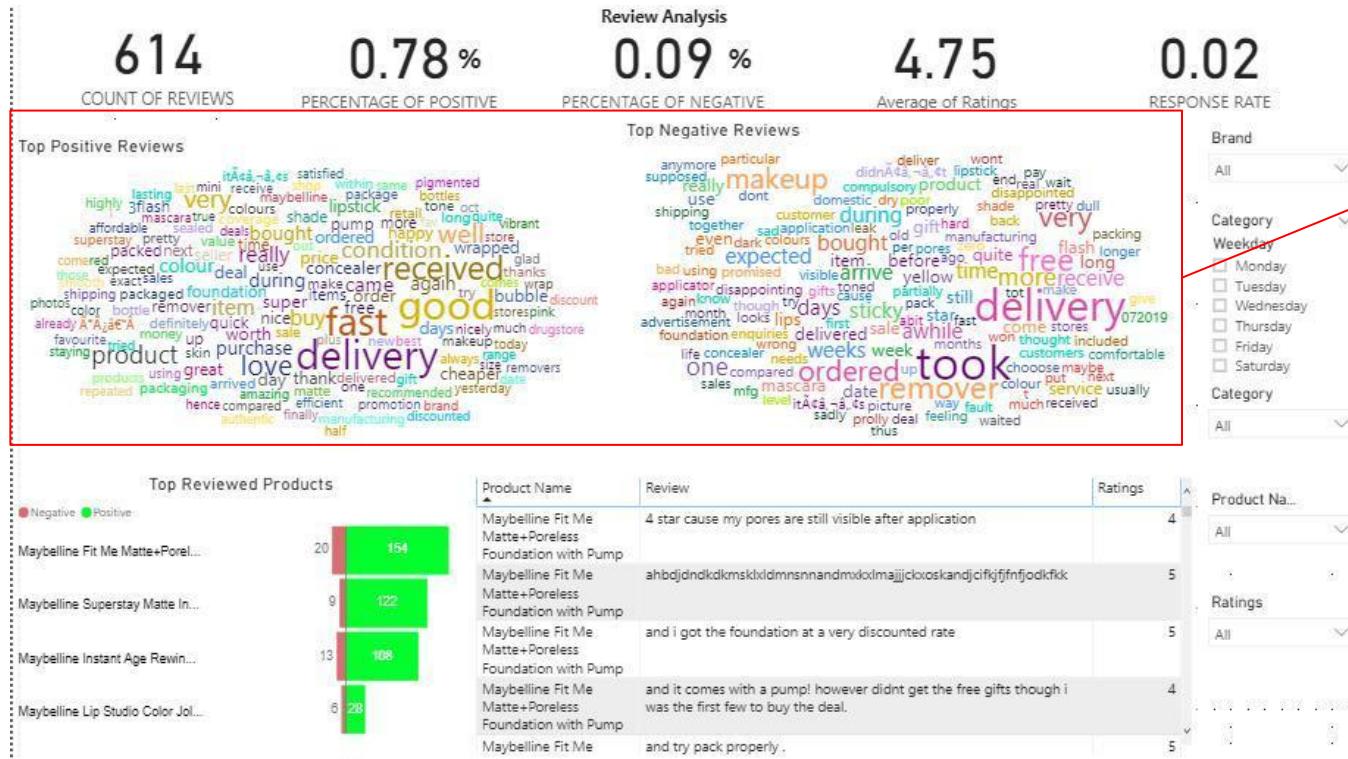
**Review Matrix**

Weekday	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Monday	2	2	5	1		2	2	6	2	2	4	1	4	2	6	2	1	1	4	10	7	6	66		
Tuesday	2					1	3	4	6	4	10	2	3	1	2	7	9	9	6	8	11	11	88		
Wednesday	4	3	1		1	2	4	7	5	6	3	4	3	2	1	8	2		12	2	1	71		71	
Thursday	3	1	2		3	4	2	4	3	6	2	4	3	13		3	9	7	2	5	6	8	82		82
Friday	7	1	1		4	5	6	3	11	14	5	4	3	5		14	13	16	16	8	136		136		
Saturday	8				4	6	5	3	9	1	14	2	4	4	7	10	16	5	4	102			102		
Sunday	6	2	2			1	1	3	1	12	7	8	9	6	1	3	3	1	2		1	1	69		69
Total	32	7	9	4	1	1	5	14	22	20	23	29	44	37	27	38	33	13	27	45	41	58	46	38	614

Weekday	Monday	Tuesday	Wednesday	Thursday
Brand	All			
Category	Concealer			
Ratings	All			
Polarity	-1	(Blank)	0	1
Product Name	Maybelline Fit Me Mat...	Maybelline Instant Age...	Maybelline Lip Studio ...	Maybelline Superstay ...

Feedback #2:
Shifted it to a horizontal filter bar

Power BI Dashboard using Prototype data (Page 2)



Feedback #3:
Remove word clouds

USER FEEDBACK 2

UF Round	Feedback	Completion
2	#1: Display monthly percentage change in positive/negative reviews	Completed
	#2: Realign dashboard layout (change filters to horizontal layout)	Completed
	#3: Remove word clouds	Completed



03

PRODUCT DEMO

KPI Dashboard

3026

60.26% 

No. of Reviews

MONTHLY % CHANGE IN POSITIVE REVIEWS

12.5% 

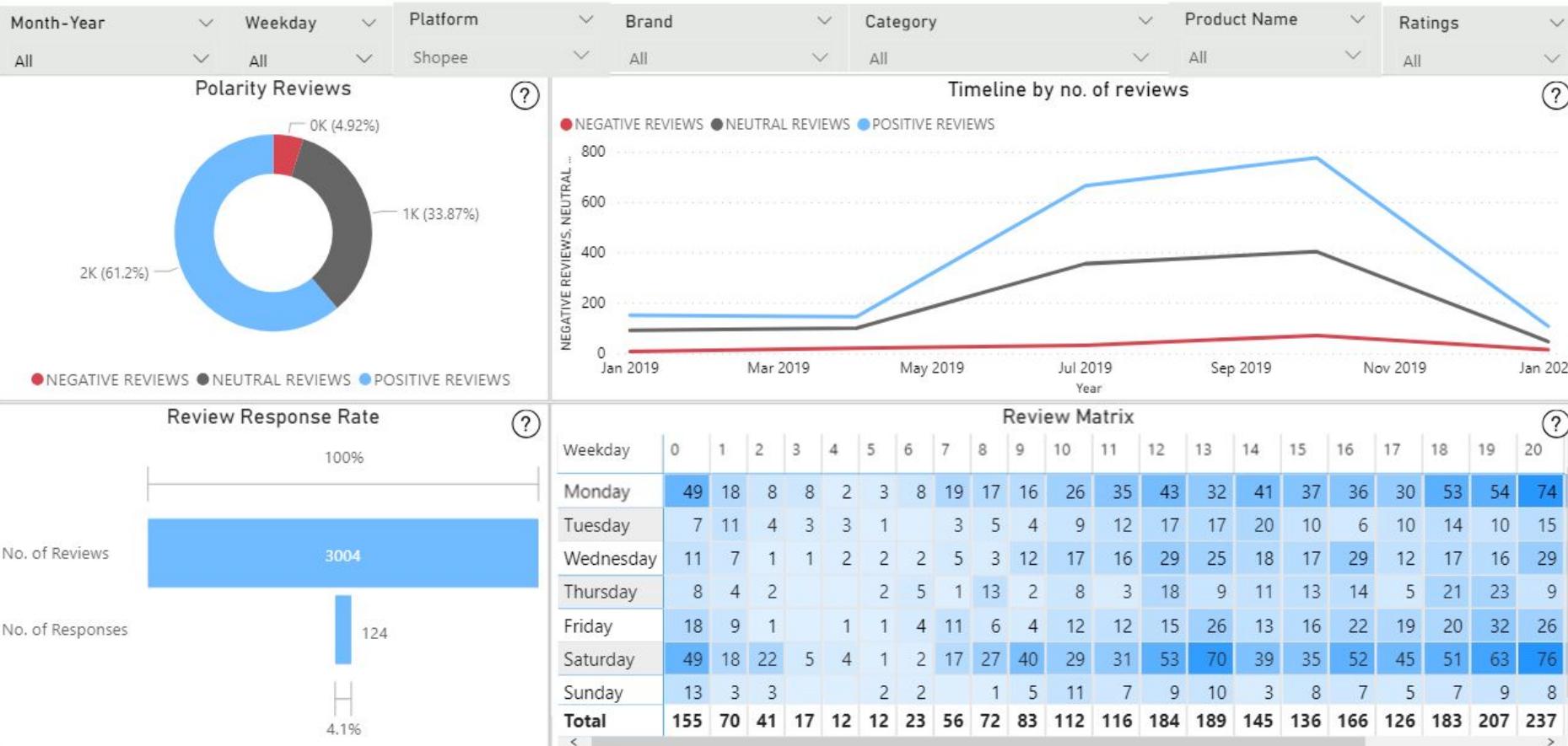
MONTHLY % CHANGE IN NEGATIVE REVIEWS

4.8

4.10% 

AVERAGE RATINGS

RESPONSE RATE



Page 1: KPI Dashboard

Objectives:

1. Identify the changes in sentiments over the month.
2. Identify the response rate of L'oreal's customer service team, and determine if this meets the team KPI.
3. Identify the time period for better manpower allocation and targeted promotions.

Review & Product Analysis

1972

100% ▼

No. of Reviews

MONTHLY % CHANGE IN POSITIVE REVIEWS

100% ▼

4.4

36.87 %



Month-Year

Weekday

Platform

Brand

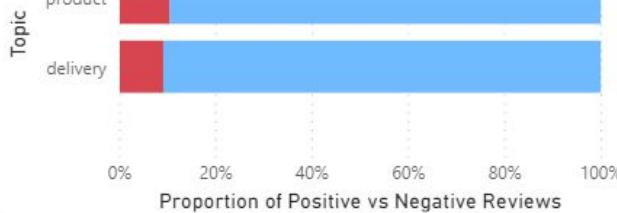
Category

Product Name

Ratings

Reviews by Topics

NEGATIVE REVIEWS ● POSITIVE REVIEWS



Correlation between Ratings and Sentiments

Overall Polarity ● Negative ● Neutral ● Positive



Top Reviewed Products

● Negative ● Positive



Product Name

Superstay Matte Ink Liquid Lipstick - All Ranges by Maybelline

L'Oreal Paris Revitalift Crystal Micro Essence 65ml

[Buy 4 Get 1] Garnier Hydra Bomb Pomegranate Serum Mask - Replumping

Brow Artist Designer Pro 3-in-1 by L'Oréal Paris

Extraordinary Oil - Gold 100ml (For All Hair Types) by L'Oréal Paris Elseve

[Buy 4 Get 1] Garnier Hydra Bomb Pomegranate Serum Mask - Replumping

Total

Review

- rich colour pigments with one swipe - for a n wiped it off with a make up remover towelette

7 days is too short of a time to review the pro fast absorbency. it doesn't take long to dry radiance effect as promoted.

a great mask to try on. definitely worth to buy a little light, but works fine

a must-have product in the handbag to mana recommend to friends.

a personal mask user and i've used many b



Page 2: Review & Product Analysis

Objectives:

1. Identify what factors affect the customer satisfaction level.
2. Identify the distribution of ratings relative to the sentiments.
3. Identify the top reviewed products.



04

NEXT STEPS

NEXT STEPS



**Improve model
accuracy**



Competitor analysis



Rating analysis



Sales analysis



THANK YOU!