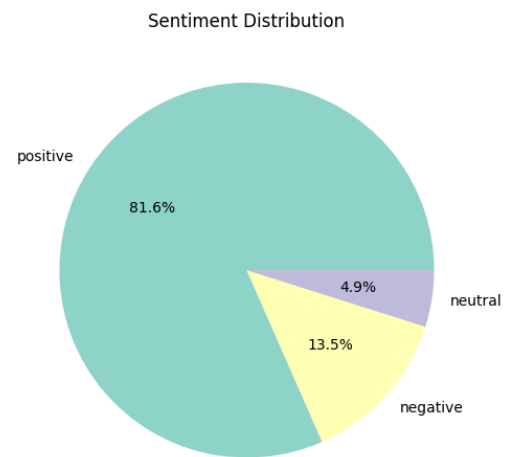
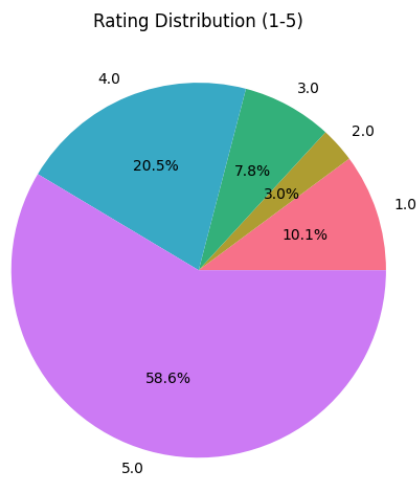


原始数据分布图



数据样例

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
0	neut ral	4.00000 0	Mi TV Stick with Built in Chromecast????(Black)	299 9	worth the mone y	i was a big fan of fire tv stick as i have used it for 15 months with all good but their after sales service has made me change my mind ultimately i have to buy new one so i have decided to look for android stick considering its potential of downloadi

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
1	neg ative	1.00000 0	Mi 5A 80 cm (32 inch) HD Ready LED Smart Android TV with Dolby Audio (2022 Model)	139 99	ng app but thats not true at all what android os advertising i mean whats a point if you do not have chrome browser in os coming back to mi stick i have choose it after lot of research have been done on the availability in the market i w	
					don't waste your mone y	this is worth with this price but im not much satisfied due to performanc e of the tv sometimes the tv is restarting when we teying to connect other wifi network

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
2	neut ral	3.00000 0	NIVIA Storm Football - Size: 5Đ Ó®Đ Â Đ Ó®Đ Â (Pack of 1, Multicolor)	429	nice	also if you switched on your tv then you need to wait for 2 to 3 mins to open its like a mobile device but in my view tv should be switched on when we turn on the tv we should not wait for more than 3 mins to see the picture wifi network is not refreshing if we turn any new wifi device screen mirroring is very worst playing li
						this ball is very bouncing its very hard its dangerous for childers under 10

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
						years its very powerful if you play this without shoes it might broke your leg this ball has a nice design and its made of rubber this ball is tubeless when i brought it i thought it was a tube ball and we played with the ball and after 3 months on the ground i shoot it very hard and it hited a rock then the next day the balls air was gone but it was not going fast then i bought after colour of this ball
3	neut	5.00000	NIVIA Storm Football -	429	awes	its very 1

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
	ral	0	Size: 5Đ Ó®Đ Â Đ Ó®Đ Â (Pack of 1, Multicolor)		ome	horrible 0 ball but 4 when we get it first it is awesome after some days it becomes dull and its decoration will disappear it didnt have bladder also this is true i buy this ball so i says this this is like a basket ball when we play with this we feel like we are playing with basketball we didnt feel like football it is so hard but it is nice to play its very bad ball i am saying true i buy this ball so i says this pls no one pls dont buy this ball pls

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
4	posit ive	3.00000 0	Hillgrove 10in1 Basic 25W Soldering Iron Kit with 5 Meter Solder Wire Cutter Stand Flux Bit Tape Tester Tweezer Wick 25 W SimpleFlat Pointed Tip	267	fair	i am not saying f
						iron is good but the wire of iron and plug is not so good the wire is break and iron doest not work when the return polices is ended so i bought another soldering iron which is very good and it wire is good but i want to repair my first iron and i dont know what is problem in my first iron then i have use multimeter which i puchase from flipkart andset multimeter in buzzer

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
5	neut ral	4.00000 0	Mi TV Stick with Built in Chromecast????(Black)	299 9	prett y good	and then i know that its wire is break so i use my 2nd iron and repair and use to solder another wire so my iron get rep
						i am using it on my 24 sony bravia led tv till now the only problem i faced is the fact that as my tv is wall mounted the device was not going inside the hdmi port easily and as a result it was not being detected by the tv next day i got one male to male hdmi extension cable and one female

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
6	posit ive	5.00000 0	cello Pack of 18 Opalware Cello Dazzle Lush Fiesta Opalware Dinner Set, 18 Pieces Dinner SetÃ Â Ã Â (White, Microwave Safe)	129 9	simpl y awes ome	to female hdmi adapter and after that once the connection s were made i could use the device without an issue till date one more thing about it is though that its power cord is really short around 1mtr
						i have a great weekend and will not have a nice time with the problem is the only real estate group of people that have used or start to get the problem i will be able are

1
0
8

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
7	posit ive	5.00000 0	Crompton 75 L Desert Air Cooler?????(White, Teal, ACGC-DAC751)	999 9	enjoying the summer months of work to be a great day ahead and send it out and i have a great weekend and we can do it for the same thing happened in my rate be able and willing and able and willing and able and willing and available at this stage we are looking for the next day i will send the same as last year i have a go	
					its not a coole r its ac coole r	its been 6 days that i am using this cooler we have 1515 room after buying this

1
0
3

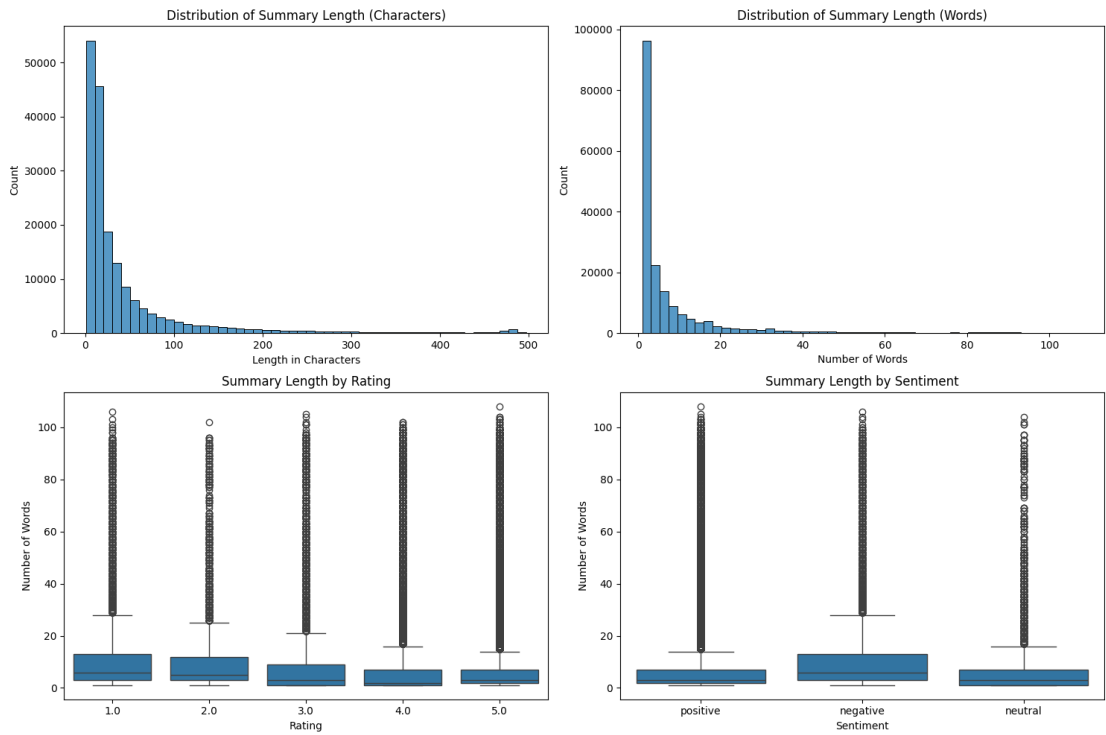
Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
						cooler what i love is it has strong solid body so dont worry that it get broken easily you can fill water from front and back and give very cool air my room feel like its december in april i have to use extra blanket in night while sleeping it has capacity of 75 litre water which last for 2 days but i love to run cooler on pump for 1 hour it cool the whole room then only air mode and it gives awesome

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
8	posit ive	5.00000 0	TP-Link Archer C20 AC WiFi 750 MBPS Wireless Router?Đ Ò Đ Ò ?Đ Ò Đ Ò (Blue, Dual Band)	159 9	good prod uct	cool
						good product by tp link easy set up and the range is pretty good in other words excellent for home usage value for money product i got it for rs 1424 better price for a duel band router even though the 1 range for 0 the 5ghz is 4 only for a close range lets say it is available in the ground where the router is placed but the 24gz can be reached even on the first with out much loss of the wifi signal only one bar goes

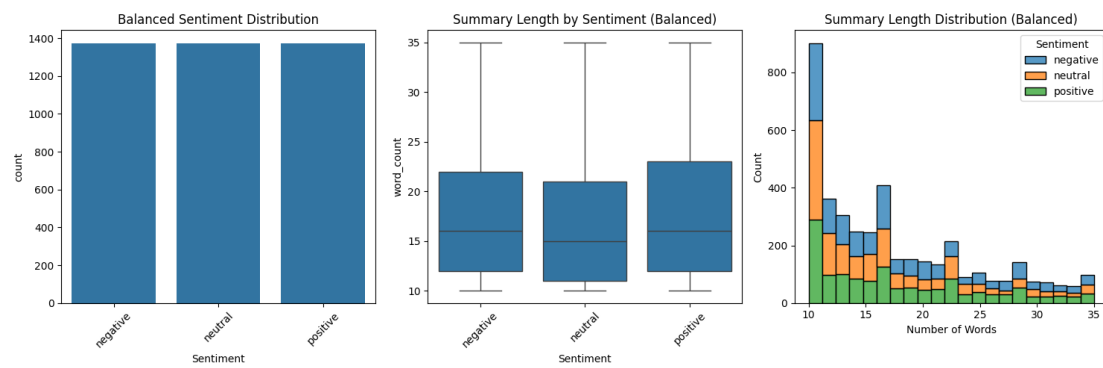
Senti ment	Rate	product _name	product_price			Rev iew	Sum mary	review_wo rd_count
9	neg ative	1.00000 0	Mi	ACM2AA	Portable	879 0	down on the first floor it is a good product to cover a 920 sq house in a	1 0 6
							i got it today what to say about this apart from the fact its not working just throwing same air back i not installed it worki in my room ng. and it faulty showed a aqi rating for ratin 10 9 and 8 g in in my app. house its hard to believe these ratings when u live in delhi when outside aqi is around 350 to 450 so i took it outside and	

Senti ment	Rate	product _name	product_price	Rev iew	Sum mary	review_wo rd_count
					it still showed me between 8 and 10 i wasnt sure so i burned some papers near this purifier still the rating was 8 so i was sure that it wasnt working do not buy this product and do not trus	

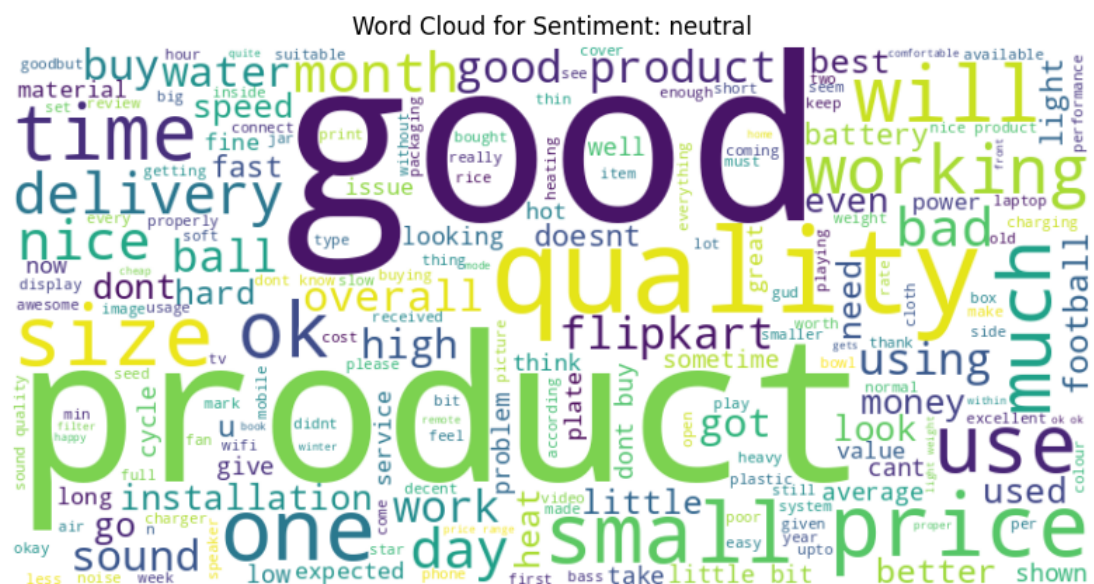
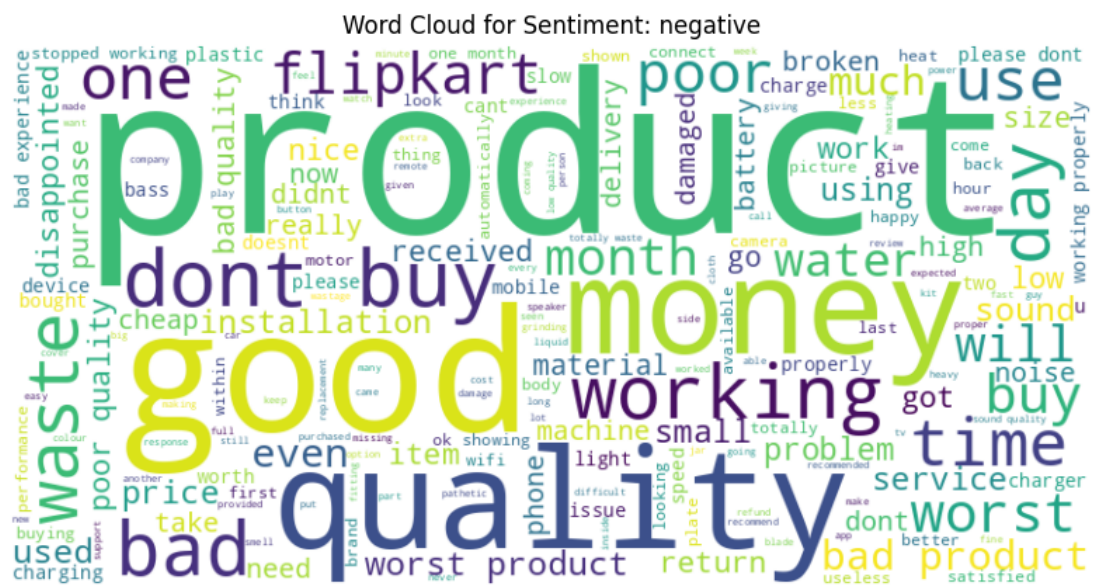
原始数据长度分布

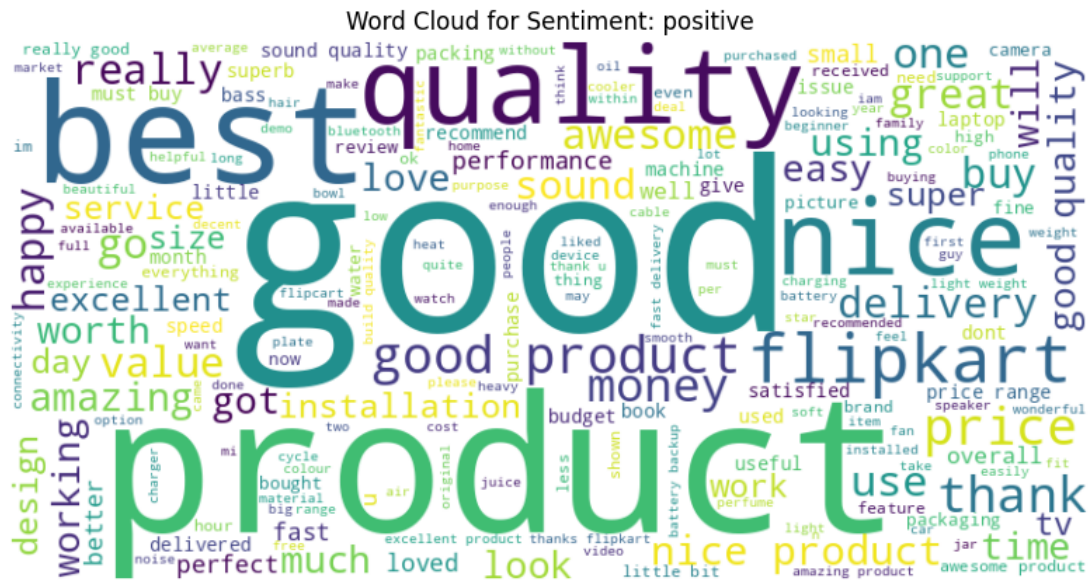


过滤后的数据分布



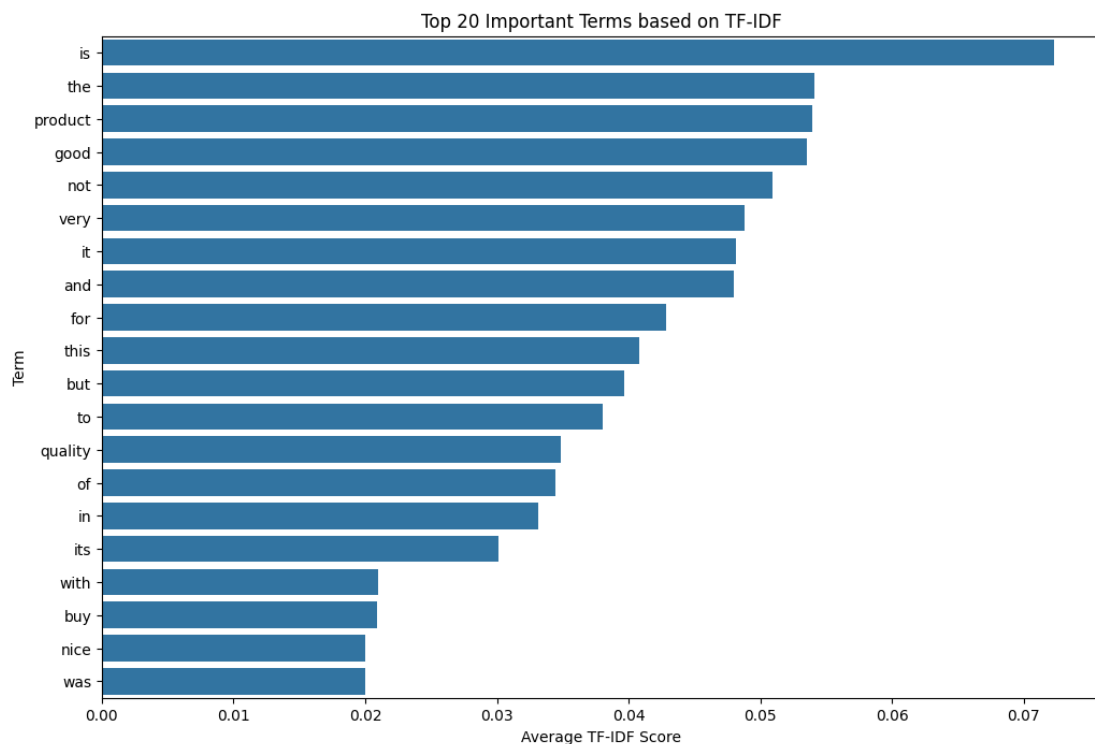
不同类别词云





TF-IDF Analysis

Perform TF-IDF vectorization on the text data and analyze term importance across documents.



Sentiment Keywords Analysis

Extract and analyze key words associated with each sentiment category.

Keywords for Sentiment: negative

	term	frequency
5	product	606
6	quality	296

3	good	286
2	dont	262
0	bad	259
1	buy	244
8	working	193
4	money	167
9	worst	146
7	waste	145

Keywords for Sentiment: neutral

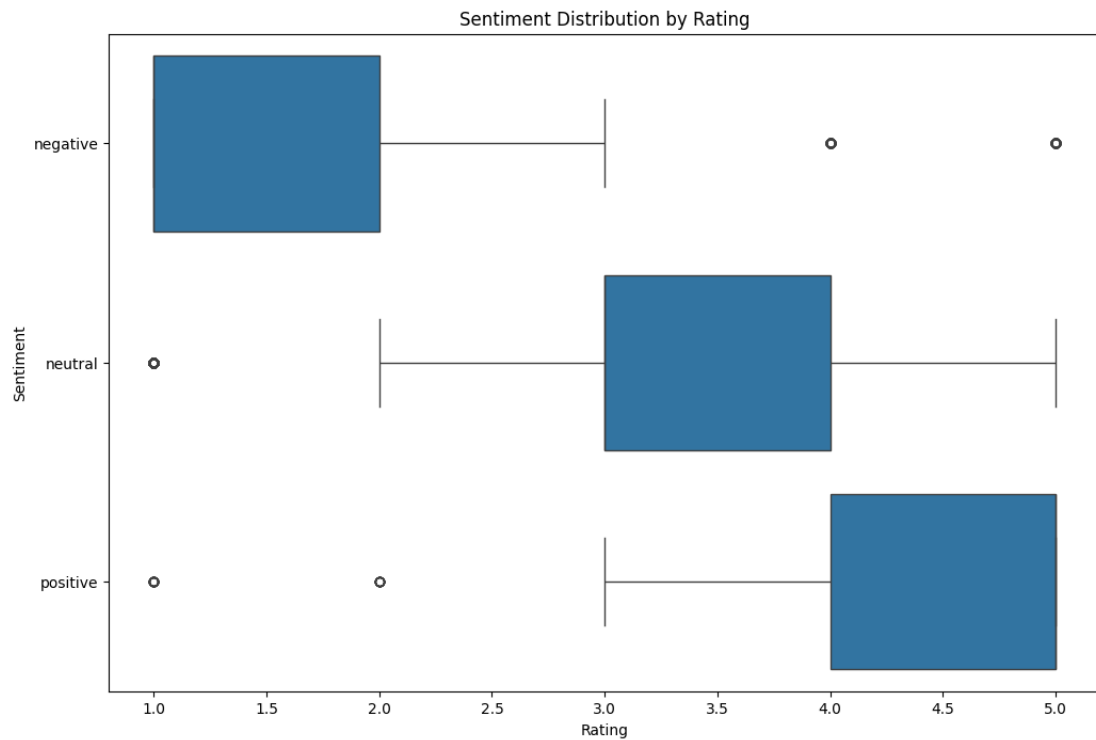
	term	frequency
1	good	535
5	product	430
6	quality	240
4	price	111
3	ok	100
0	dont	90
8	small	90
7	size	89
2	nice	81
9	use	76

Keywords for Sentiment: positive

	term	frequency
4	good	812
8	product	668
9	quality	295
6	nice	240
1	best	199
3	flipkart	175
7	price	174
5	money	111
0	awesome	107
2	delivery	107

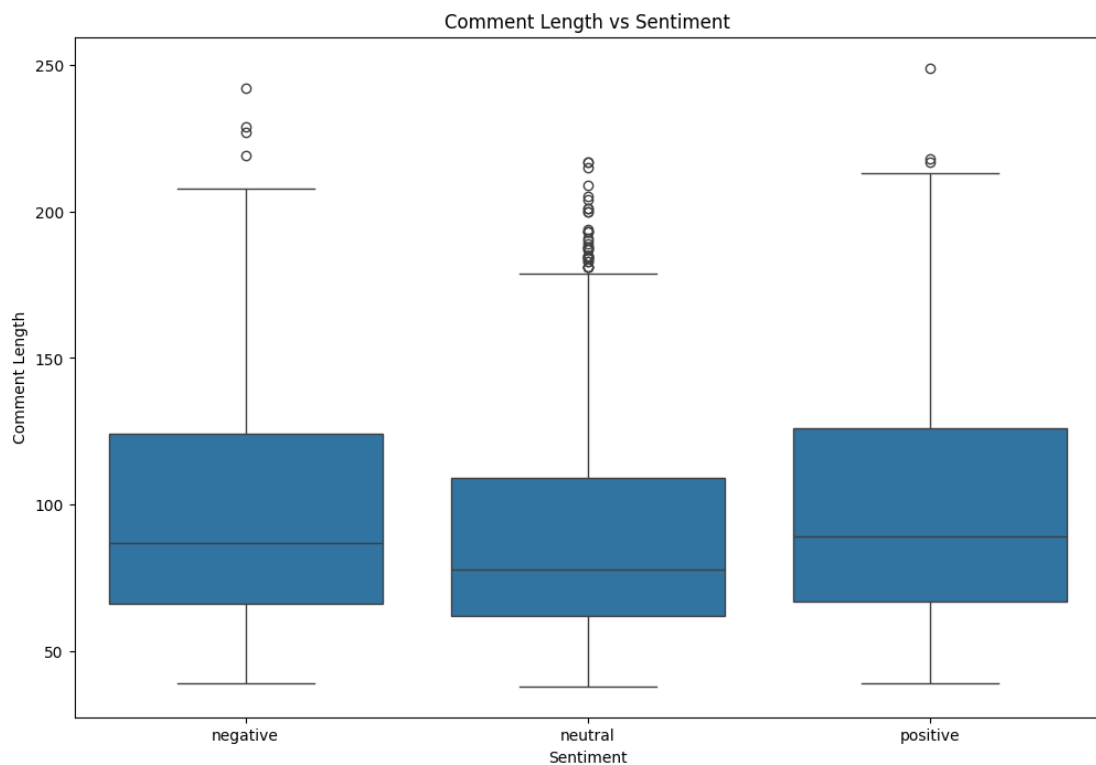
Sentiment vs Rating Correlation

Explore the relationship between sentiment scores and ratings using correlation analysis and visualizations.



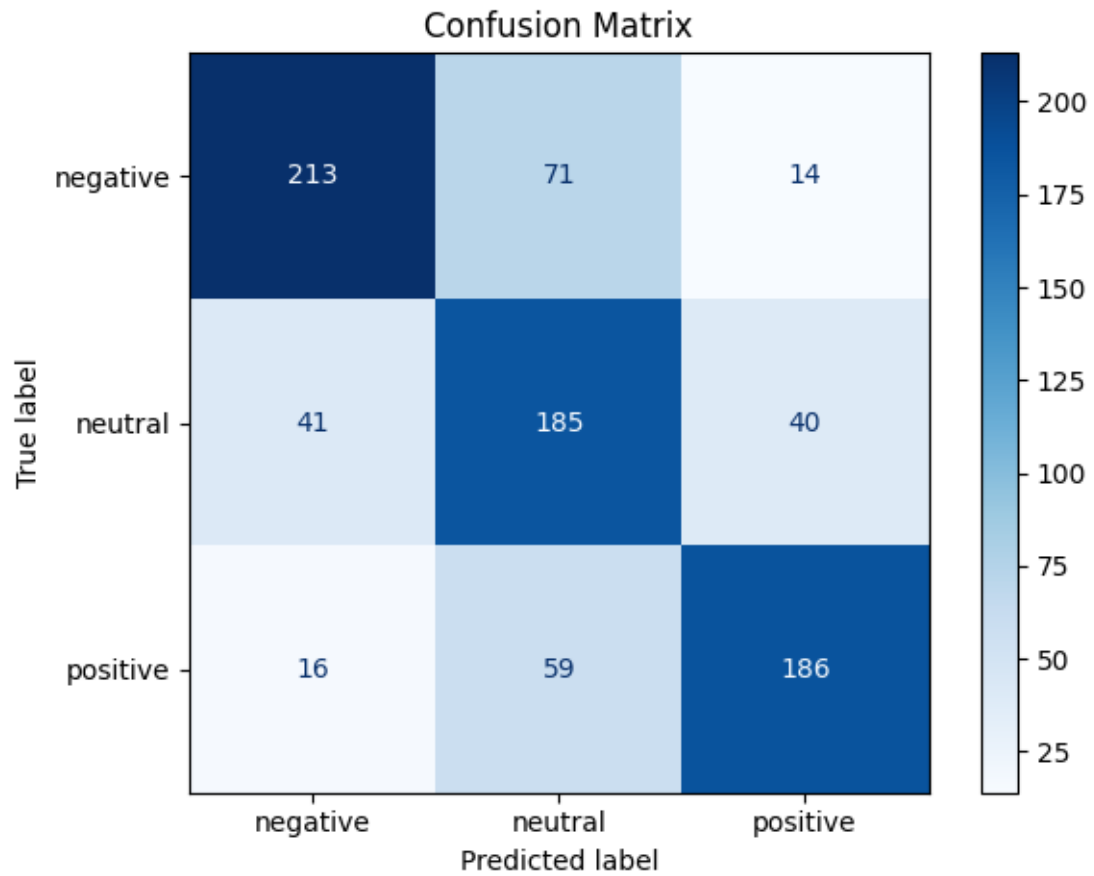
Comment Length vs Sentiment

Analyze how comment length correlates with sentiment categories using box plots and statistical tests.



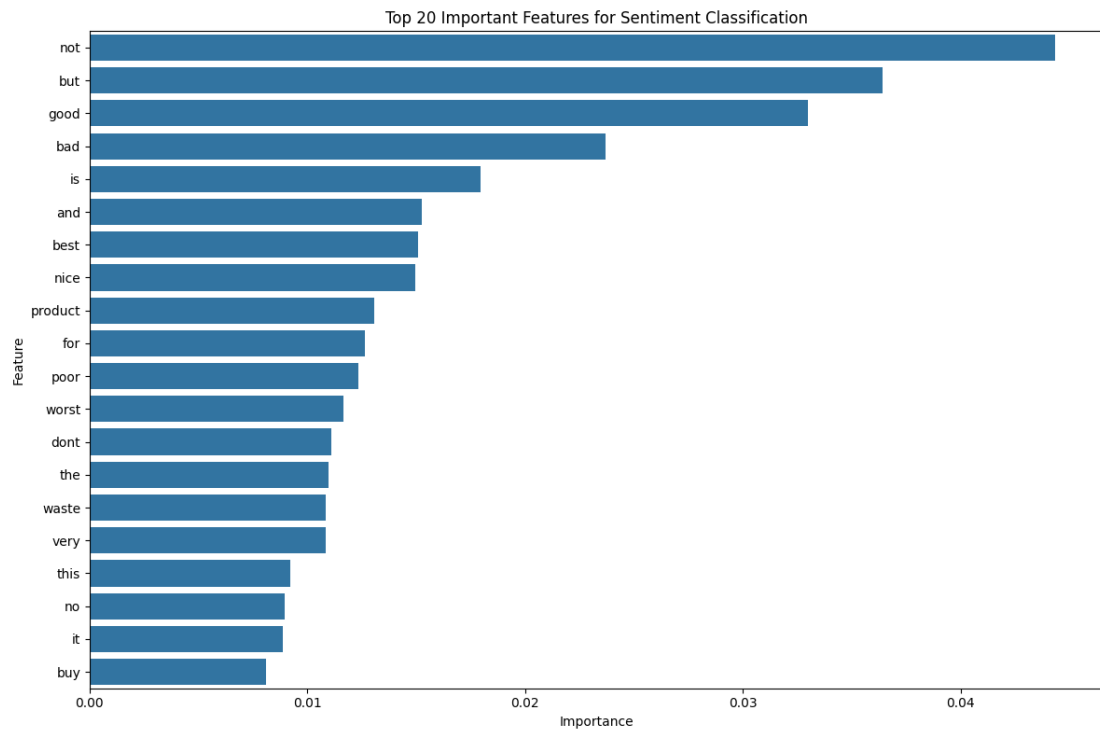
Confusion Matrix Evaluation

Create and analyze confusion matrix to evaluate sentiment classification performance.

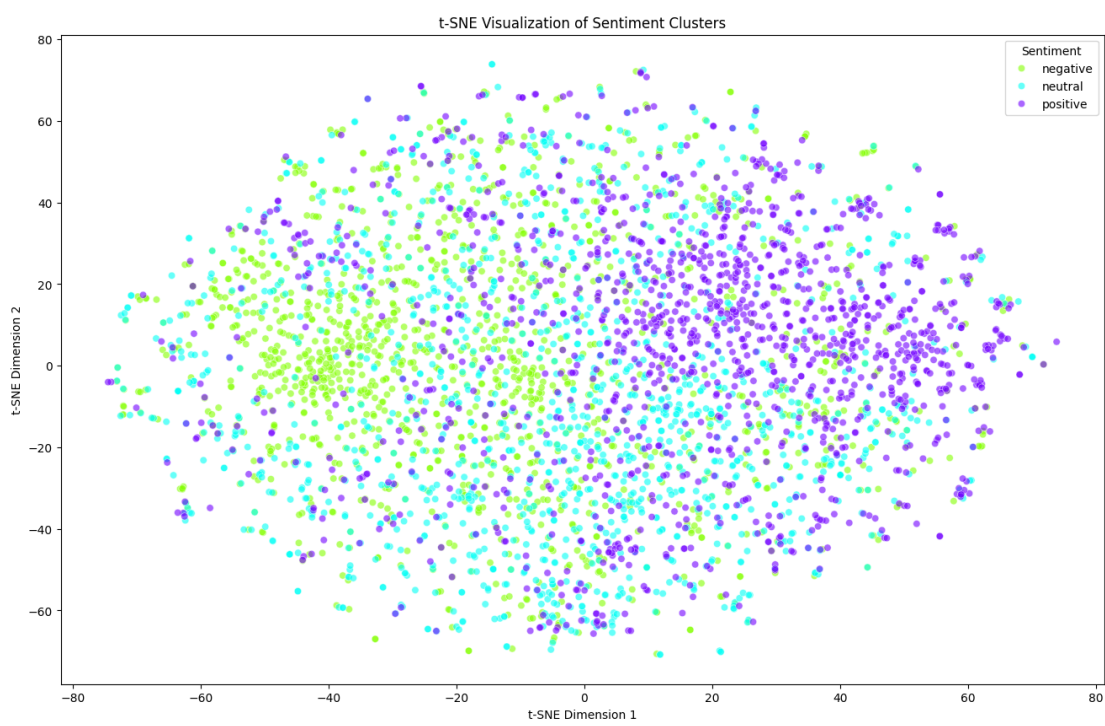


Feature Importance Analysis

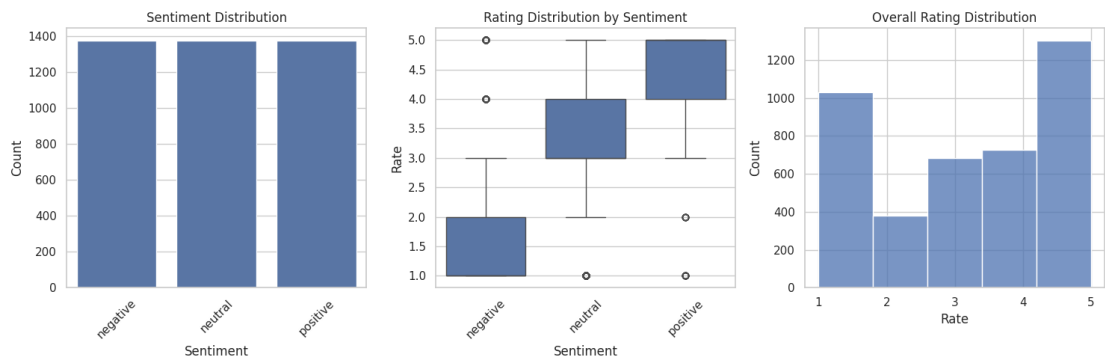
Identify and visualize the most important features for sentiment classification.



TSNE Visualization
Apply t-SNE dimensionality reduction to visualize sentiment clusters in 2D space.



数据分布



词云

[illegible][illegible]

Tf-idf 分析

