



Text Categorisation & ChatGPT

Classification of sub-reddit posts



Presentation of the Project

- The idea
- The main goal
- ChatGPT version 3.5



The Data

- Reddit Posts
 - New World Sub-reddit (<https://www.reddit.com/r/newworldgame/>)
- Two datasets
 - Only posts
 - Post and comments
- Collecting the data

	A	B	C	D	E	F	G	H	I	J	K	
1	Text	Category		Accuracy		Subject	Accuracy		Feeling	Accuracy		
2	They build a d	Complaint:		1		PvP related discv	0.75		Negative	1		
3	I can think of p	Question		1		PvP related discv	1		Neutral	1		
4	I play pvp a lot	Complaint:		1		PvP related discv	1		Negative:	1		
5	I am just curios	Complaint:		1		None (not related	1		Negative	1		
6	I've been notic	Question		1		None (not related	1		Neutral	1		
7	Hey are thrashi	Question		1		PvE related discv	0.5		Neutral	1		
8	Fairly new play	Question		1		PvP related discv	0.75		Neutral	1		
9	I'm pretty clue	Question		1		None (not related	1		Positive:	0		
10	I understand it	Praise		1		None (not related	1		positive.	1		
11	How many day	Question		1		PvP related discv	0.5		Negative	1		
12	I have no idea v	Complaint		1		PvP related discv	1		Negative	1		
13	I have the butc	None (Statement and Bug Report)		0.75		PvP related discv	0.5		Neutral	1		
14	So I might be g	Question		1		PvE related discv	0.5		Neutral	1		
15	They really nee	Suggestion		1		PvE related discv	1		Neutral	1		
16	i'm planning or	Question		1		PvE related discv	0.5		Neutral	1		
17	Does runeglass	Question		1		PvE related discv	0.5		Neutral	1		
18	Does anyone el	Complaint:		0.75		Hardware-related	0.5		Negative	0		
19	Does anyone el	Complaint:		1		PvP related discv	0.5		Negative	1		

Table 1: Posts only collection - full table available on GitHub



Working with ChatGTP

- Categorisation Task
- Three sorts of categorisation
- Intent of limitation
 - Evaluate the respect of the prompt



Three Prompts

1. Using only the following categories: "Question", "Complaint", "Praise", "Suggestion" sort the following text snippets. If no category fits use "None"
2. Using only the following categories: "Builds", "PvP related discussions", "PvE related discussions", "Hardware-related" categorize the following text snippets. If no category fits use "None". You can give more than one category to each snippet
3. Can you say if the following text snippets have a "positive", "negative", or "neutral" position towards the game?



Evaluating the score

- Different scores possible, depending on the prompt

Prompt 1

- a. Category is okay = 1
- b. Category could be okay, but not main element of the text = 0.5
- c. Category would've been good, if prompt allowed it: = 0.25
- d. Category is wrong/Category is not part of the choice and is wrong/No input = 0

Prompt 2

- e. All categories have been identified = 1
- f. 50% + of categories have been correctly identified = 0.75
- g. Some categories (-50%) have been correctly identified = 0.5
- h. One category has been identified/Suggested alternative could be ok = 0.25
- i. No category has been correctly identified/No input/Suggestion category is wrong = 0



Evaluating the score

Prompt 3

- a. feeling correctly identified = 1
- b. Two answers, but one is correct: 0.5
- c. feeling not correctly identified/not answered/wrongly classified = 0

- Answers were then manually looked at and evaluated

Accuracy according to prompt 1 - Posts and Comments

First Try

Accuracy	0,5325	
	Accuracy Category 2	
	Right	47
	Partly Right	2
	Neutral	21
	Wrong	31
	Total	101

Second Try

Accuracy		0,8
	Accuracy Category 1	
	Right(1)	80
	Partly Right(0.5)	1
	Wrong(0)	20
	Total:	101



Accuracy according to prompt 2 - Posts and Comments

103	Accuracy	0,5717821782	
104			
105			
106		Accuracy Subject	
107		Right	35
108		Mostly Right	27
109		Neutral	4
110		Partly Right	2
111		Wrong	33
112		Total	101

Accuracy according to prompt 3 - Posts and Comments

First try

Accuracy	0,6089108911	0,
	Accuracy Feeling	
	Correct	58
	1 answer Corr	7
	Wrong	36
	Total	101

Second try

Accuracy	0,7574257426		
		Revised Accuracy Feeling	
		Correct	69
		1 answer corr	15
		Wrong	17
		Total	101

Accuracy - prompt 1, 2 and 3 - Posts only

Prompt 1

Accuracy		0,915
	Accuracy Category	
	Right	86
	Right (OOS)	6
	Partly Right	1
	OOS is right(0	2
	Wrong	5
	Total	100

Prompt 2

Accuracy		0,7825
	Accuracy Subject	
	Right	59
	Partly Right	6
	Neutral	29
	OOS is right	1
	Wrong	5
	Total	100

Prompt 3

Accuracy		0,885
	Accuracy Feeling	
	Right	88
	Neutral	1
	Wrong	11
	Total	100



Comparison between the tables - Prompt 1

Posts and Comments

Accuracy		0,8
	Accuracy Category 1	
	Right(1)	80
	Partly Right(0.5)	1
	Wrong(0)	20
	Total:	101

Posts only

Accuracy		0,915
	Accuracy Category	
	Right	86
	Right (OOS)	6
	Partly Right	1
	OOS is right(0	2
	Wrong	5
	Total	100



Comparison between the tables - Prompt 2

Posts and Comments

Accuracy	0,5325	
	Accuracy Category 2	
	Right	47
	Partly Right	2
	Neutral	21
	Wrong	31
	Total	101

Posts only

Accuracy		0,7825
	Accuracy Subject	
	Right	59
	Partly Right	6
	Neutral	29
	OOS is right	1
	Wrong	5
	Total	100

Comparison between the tables - Prompt 3

Posts and Comments

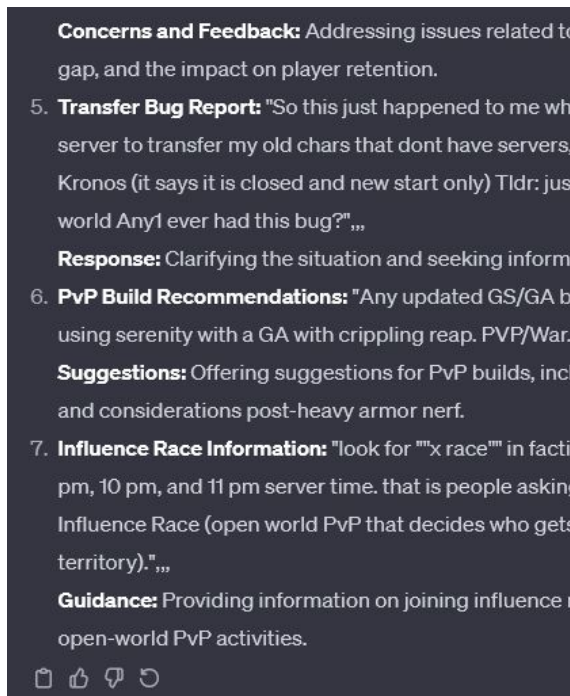
Accuracy	0,7574257426		
		Revised Accuracy Feeling	
		Correct	69
		1 answer correct	15
		Wrong	17
		Total	101

Posts only

Accuracy		0,885
	Accuracy Feeling	
	Right	88
	Neutral	1
	Wrong	11
	Total	100

Problematics

- ChatGPT got “too smart”
 - Gave categories, that were right, but not part of the original prompt
 - When asked to re-do, the result would be the same
 - Solution
 - Effects accuracy



Example of ChatGPT assigning
“not-allowed categories”



Problematics

- ChatGPT would often skip data
 - Probably could not answer the prompt, so it ignored the text entirely
 - Often seen with comments
 - Effects on Accuracy
 - Solutions

	0
War Participation and Skill Gap	0,25
	0
	0
	0
PvP Build Recommendations	0
	0
	0
	0
	0
	0
Influence Race Information	0,25
	0
	0
	0
	0



Observation

- ChatGPT can do categorisation, but...
 - Supervision required
 - Work-around
 - Accuracy can be low for certain categorisation (i.g. “feelings”)
- Context matter
 - Comments, even evaluated with their respective posts have lower accuracy
 - Posts only has a higher accuracy on all three counts
- Limitations are not respected by ChatGPT, but...
 - after a few tries, it took longer before ChatGPT started to ignore the prompt (48%, 78%, 85%)



Conclusion

- Relatively high accuracy, when supervised
- Context matters and comments are often treated separately from their posts, even if given together
- Few data, due to manual retrieval



Questions?



Thank you!