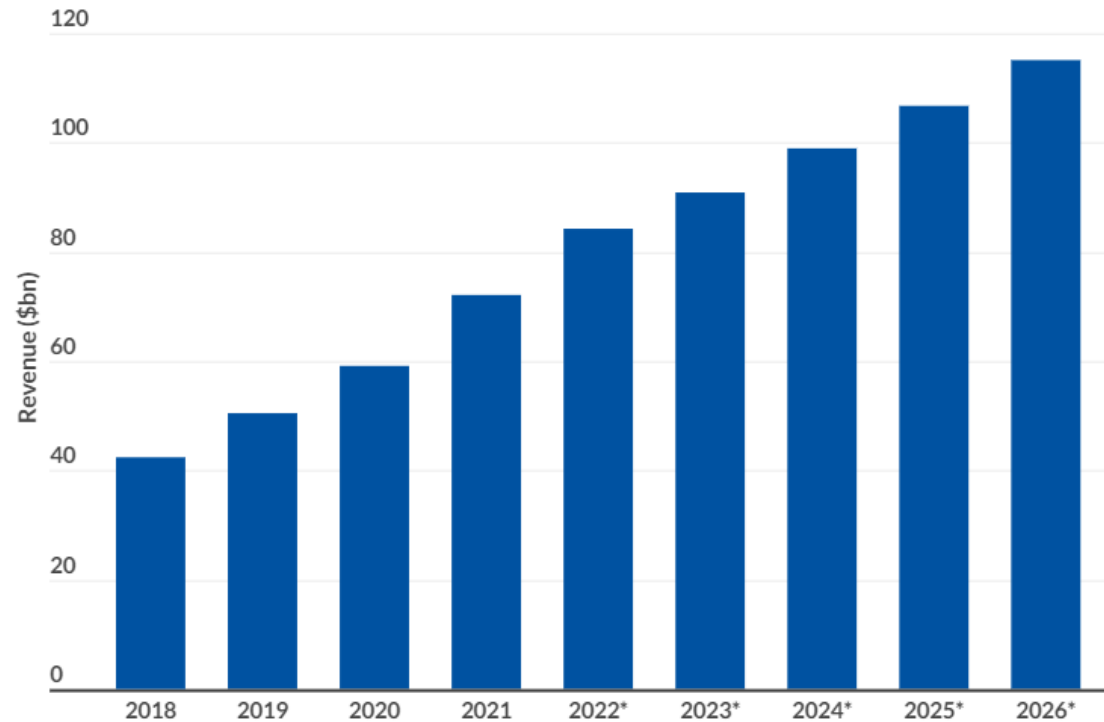


# Global Streaming Market Size and Streaming Apps

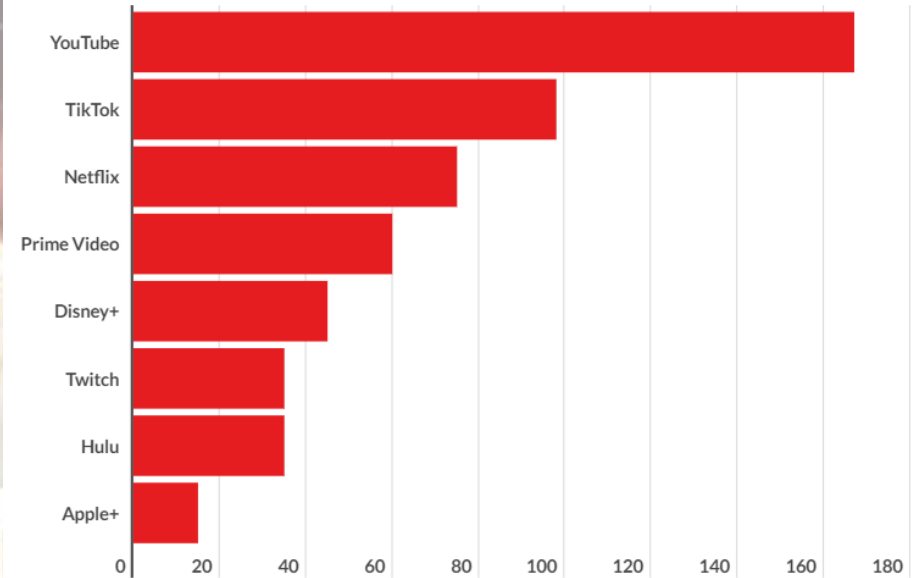
Global streaming projected market size 2018 to 2026 (\$bn)



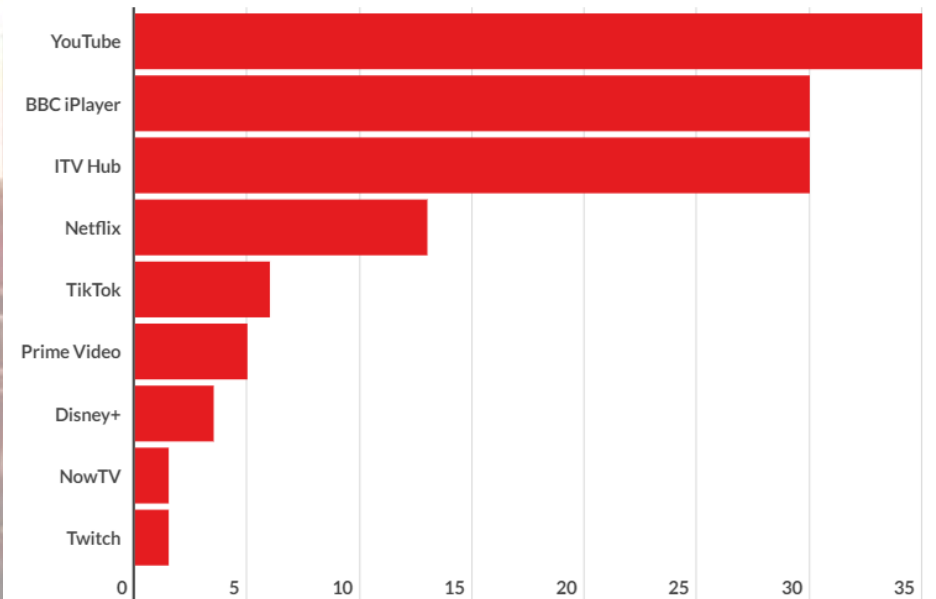
Sources: Grand View Research, pwc, Statista

Presentation by Napat Phongvichian 6420422022  
Kruawun Jankaew 6420422016

US video streaming app usage 2021 (mm)



UK video streaming usage 2021 (mm)



Source: Company data

# Stats on Gaming Streamers on YouTube

## Most Watched YouTube Gaming Streamers

By Hours Watched • January 1 - December 31, 2022

Get more viewership analytics with PRO access:  
[streamcharts.com / pricing](https://streamcharts.com/pricing)



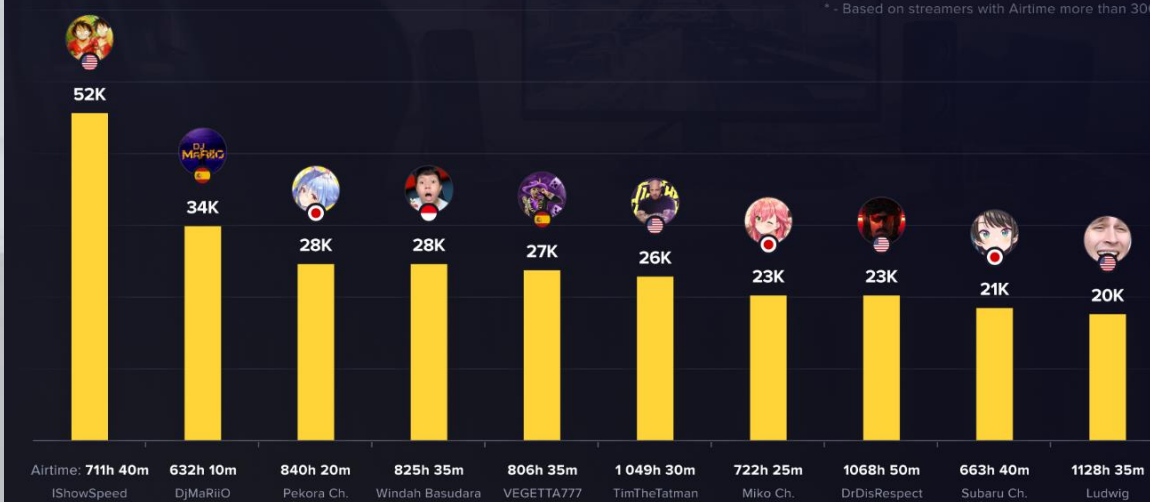
## Most Popular YouTube Gaming Streamers

By Average Viewers\* • January 1 - December 31, 2022

Get more viewership analytics with PRO access:  
[streamcharts.com / pricing](https://streamcharts.com/pricing)



\* - Based on streamers with Airtime more than 300h



## Our Project Objective

Exploring user behavior and chat communication within a YouTube live streaming to extract information on:

- User behavior,
- chat content including sentimental analysis,
- and user engagement evoking factors.



DrDisRespect ✓

@DrDisRespect  
4.26M subscribers

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Description

The Official Dr Disrespect YouTube Channel

Stats

Joined Jan 6, 2010

320,813,534 views

- One of the most dominating game streamer.
- An entertainer in the gaming industry rather than a professional gamer, with an arrogant and funny character.
- Specialising in multiplayer games, especially Battle Royale Games (i.e., Call of Duty, Warzone, PUBG, Apex Legends, Fortnite)

# THEBROKENMACHINE

use code **BROKENMACHINE** for a discount



Get 10% off KontrolFreeks!



TheBrokenMachine ✓

@TheBrokenMachine  
401K subscribers

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## Description

Optimised for #Battlefield 2042 and much more! TheBrokenMachine is my name, come say hello - livestreams here almost everyday 2pm UK time!

Get 10% off KontrolFreeks with code BROKENMACHINE [http://www.kontrolfreak.com/?a\\_aid=BROKENMACHINE](http://www.kontrolfreak.com/?a_aid=BROKENMACHINE)

Channel Thumbnail includes image by: <https://twitter.com/Shadow6ix>

## Stats

Joined Aug 20, 2011

110,191,733 views




- British First Person Shooter game streamer.
- Specialising in multiplayer games (i.e., Battlefield, Warzone)



# Revenue from Game Streaming (apart from YouTube Views)

Membership



DrDisRespect

Join this channel

Get access to membership perks


Champions Club

THB 80.00/month


Join

Recurring payment. Cancel anytime. Creator may update perks.

Loyalty badges next to your name in comments and live chat



Custom emoji to use in comments and live chat



Top chat replay

\$401.00

\$4.99

£17.99

28 mths

JBOMB

DO it timmy

drip

lowkey can't hear Tim

GregZ

Doc has his FFA number already. Do your FFA!!

Crooklynkat

FLOOD ITTTTTTTTTTTTT

Crooklynkat

FLOOD IT

thisjigisup

"free for all timmy" - dr disrespect

TRIPPINOCTO

Go hawks Go Seattle Seahawks

Lars Lars

Jonathan Di Gennaro

Matthew

\$401.00

XRod 1992

if you by the ocean I can get why you want the hoodie

DylanHibz75

Do it!!

LONETK

i cant hear

DeadGenGaming

Members-only mode was enabled

Top chat replay

19 mths

Member

10 mths

\$5.00

Justin Burr

\$5.00

Timmy was beating you, then his alarm went off because he had to WAKE UP!!! NOBODY BEATS THE 2TIME

The Midge

Member for 10 months

Champions Club

Happy Friday, Doc. Be cool.

Billy Reynolds

Doc is drinking air

Roboto

whats wrong with his bottle?

B. Cow

Travis Murray

The one and only the 2x back to back baby! Let's see the VSM today! Timmy tenders does not stand a chance

Christopher Escalante


Welcome to Champions Club!

Slaughter Doll

Member for 19 months

Champions Club

Membership



TheBrokenMachine

Join this channel

Get access to membership perks

Emote Membership

THB 35.00/month

Join

Recurring payment. Cancel anytime. Creator may update perks.

Standard Membership

THB 80.00/month

Extra Support Tier

THB 750.00/month


Elite Membership

THB 1,500.00/month


GOD MACHINE Membership

THB 15,000.00/month

Loyalty badges next to your name in comments and live chat



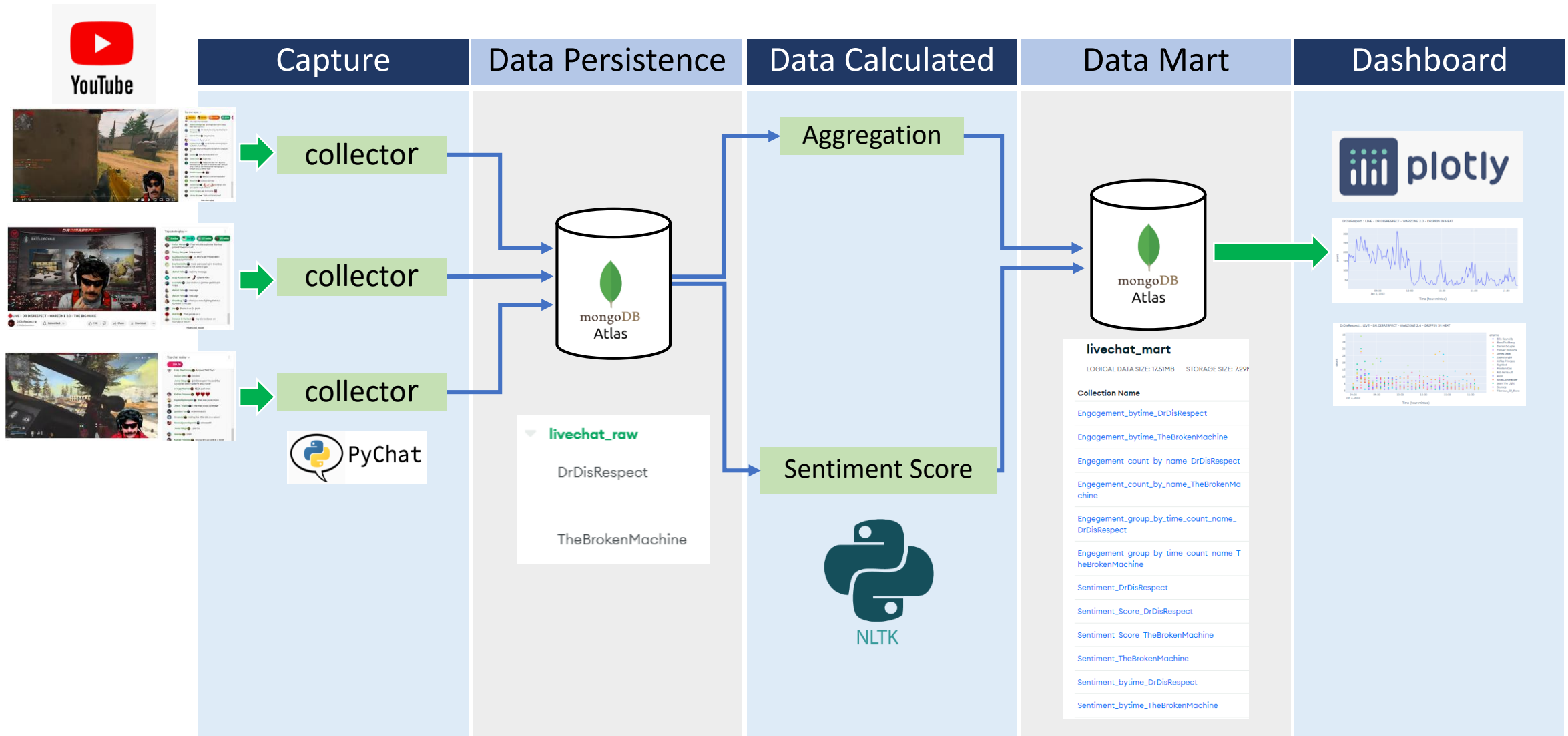
Custom emoji to use in comments and live chat



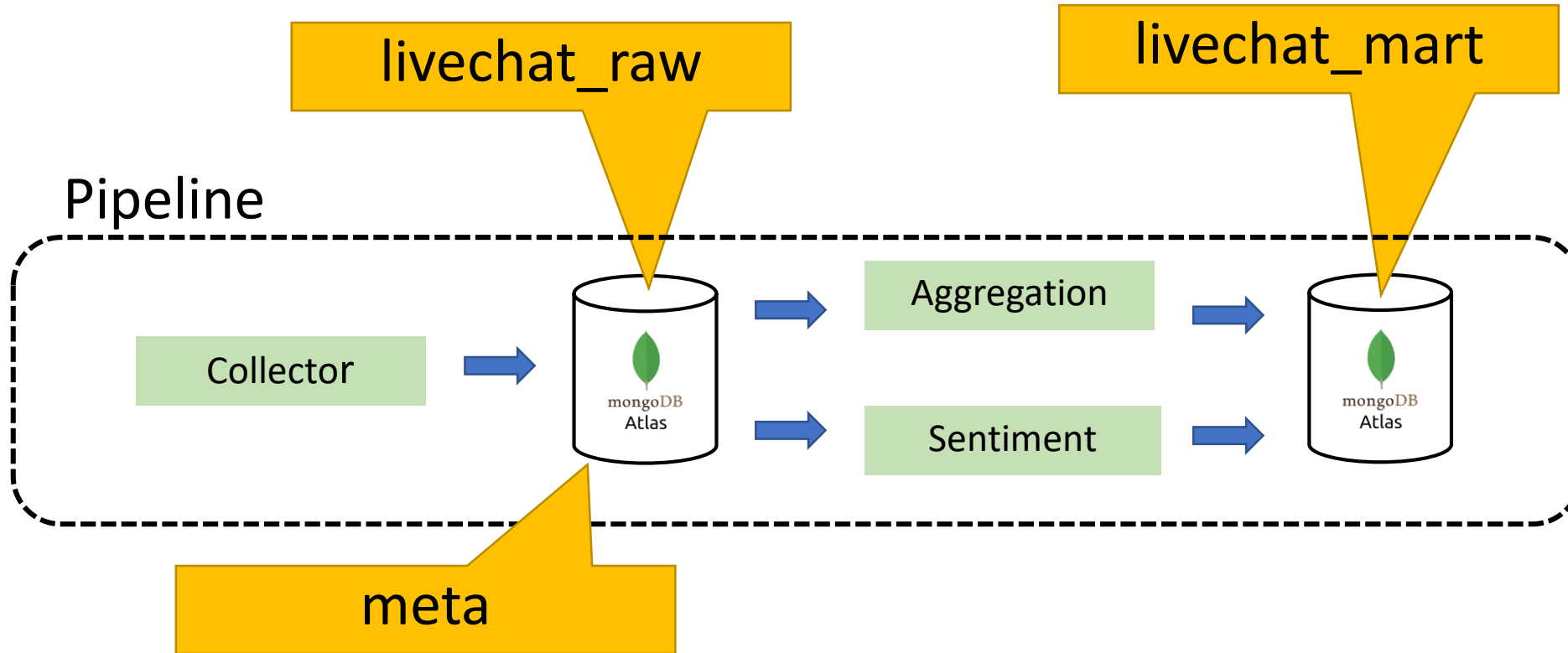
An aerial, slightly hazy view of a coastal city. The city is built on a peninsula or near the water's edge. On the right side, a large industrial facility, possibly a power plant or refinery, is visible, emitting a thick, bright green plume of smoke or steam that rises into the sky. The rest of the city consists of various buildings, roads, and some greenery. The water is a deep blue-grey color, and the sky is filled with soft, white clouds. The overall tone is somewhat desaturated, giving it a cinematic or historical feel.

# Data Pipeline

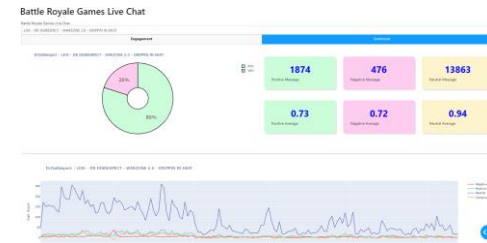
# Data Journey



# Data Pipeline



## Dashboard





# Data Management

Database: livechat\_raw

Collection: channel\_name

```
_id: ObjectId('63b57ce35666a334ca2c5a7f')  
datetime: "2023-01-02 09:02:23"  
vid: "tuxuH67r7y8"  
aname: "Microwaved Grape"  
msg: "GIVE ME BACK MY SON"
```

---

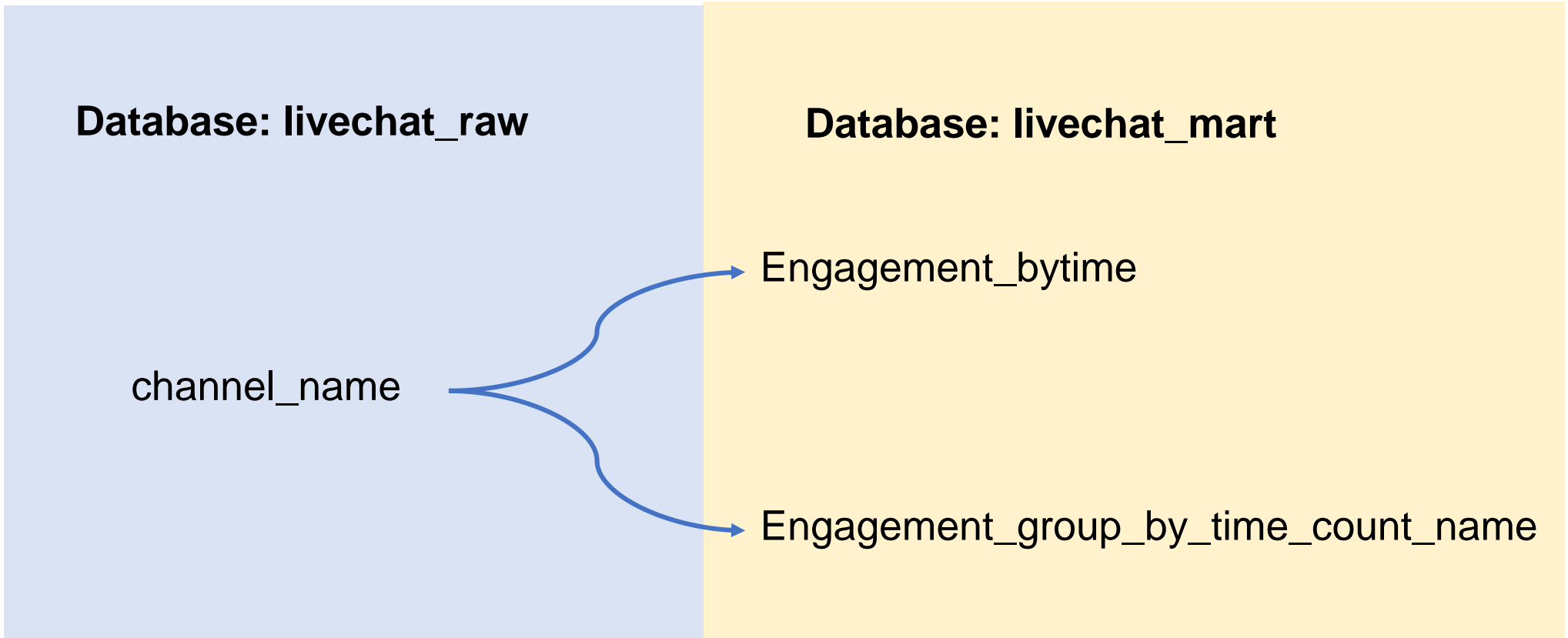
```
_id: ObjectId('63b57ce45666a334ca2c5a80')  
datetime: "2023-01-02 09:02:24"  
vid: "tuxuH67r7y8"  
aname: "Mattyboocakes"  
msg: "New menu inside the arena? "
```

---

```
_id: ObjectId('63b57ce55666a334ca2c5a81')  
datetime: "2023-01-02 09:02:25"  
vid: "tuxuH67r7y8"  
aname: "Casanova Frankenstein"  
msg: "MFING tree star!!"
```

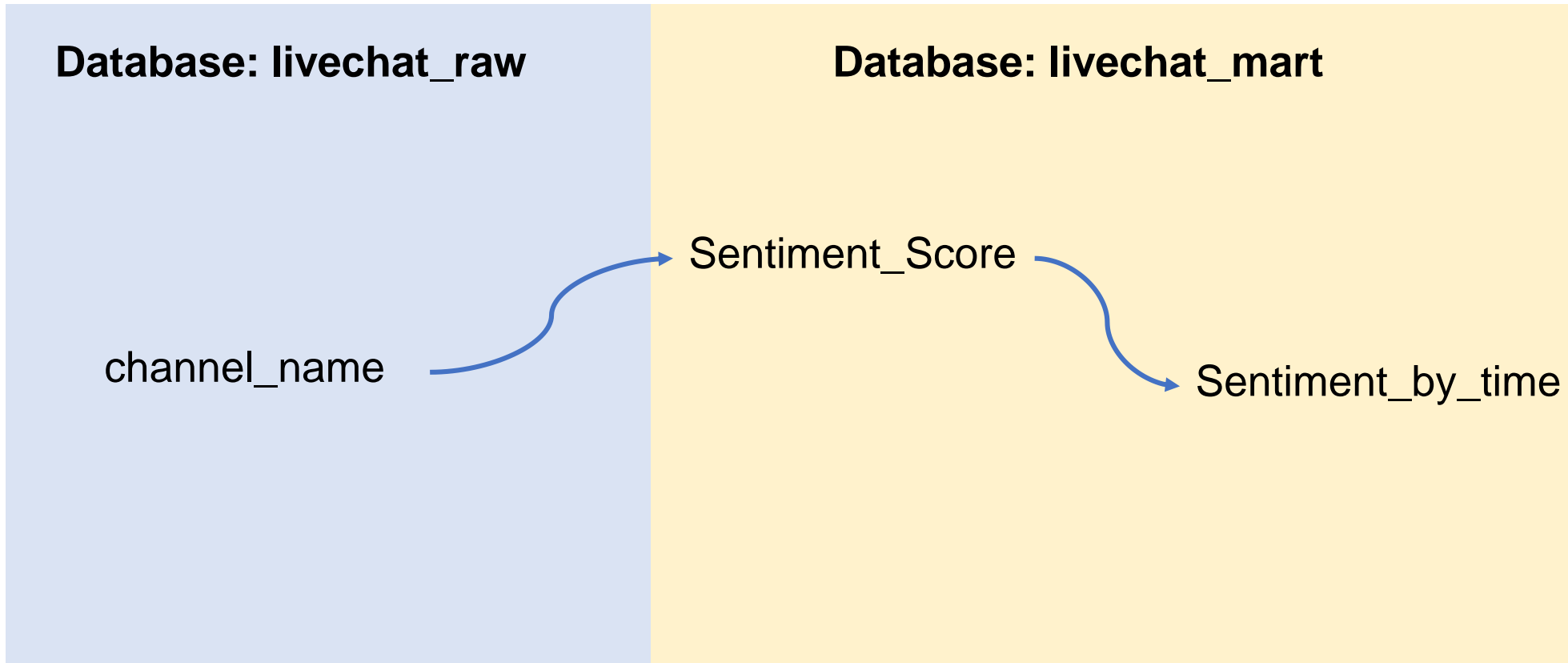
# Data Management

## Engagement Mart



# Data Management

## Sentiment Mart













# Data Management

Engagement\_bytime

	time	count
0	2022-12-28 08:55:00	38
1	2022-12-28 08:56:00	159
2	2022-12-28 08:57:00	196
3	2022-12-28 08:58:00	152
4	2022-12-28 08:59:00	139
...	...	...
146	2022-12-28 11:21:00	140
147	2022-12-28 11:22:00	69
148	2022-12-28 11:23:00	29
149	2022-12-28 11:24:00	22
150	2022-12-28 11:25:00	15

Engagement\_group\_by\_time\_count\_name

	aname	time	count
0	A_Lex661	2022-12-28 08:55:00	16
1	A_Lex661	2022-12-28 09:00:00	13
2	A_Lex661	2022-12-28 09:05:00	4
3	A_Lex661	2022-12-28 09:10:00	5
4	A_Lex661	2022-12-28 09:15:00	1
...	...	...	...
402	 ROG-ghostsyoutube 	2022-12-28 10:20:00	3
403	 ROG-ghostsyoutube 	2022-12-28 10:30:00	4
404	 ROG-ghostsyoutube 	2022-12-28 11:10:00	2
405	 ROG-ghostsyoutube 	2022-12-28 11:15:00	4
406	 ROG-ghostsyoutube 	2022-12-28 11:20:00	6



# Data Management

Sentiment\_Score

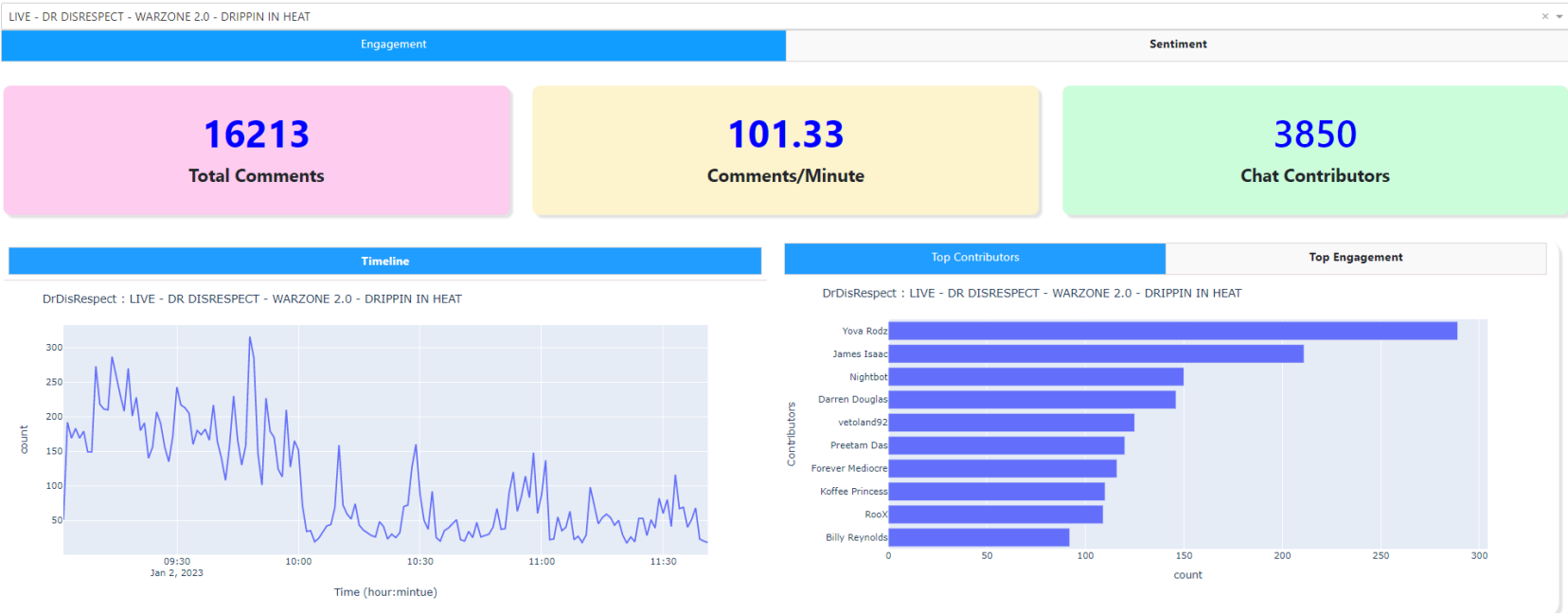
	datetime	score	Polarity
0	2022-12-30 09:05:37	1.000	NEU
1	2022-12-30 09:05:37	1.000	NEU
2	2022-12-30 09:05:38	0.546	POS
3	2022-12-30 09:05:39	0.607	POS
4	2022-12-30 09:05:40	1.000	NEU
...	...	...	...
19941	2022-12-30 11:37:08	1.000	NEU
19942	2022-12-30 11:37:09	0.556	NEU
19943	2022-12-30 11:37:09	1.000	NEU
19944	2022-12-30 11:37:10	1.000	NEU
19945	2022-12-30 11:37:10	1.000	POS

Sentiment\_by\_time

	neg	neu	pos	compound	time
0	0.744	33.475	3.781	2.6046	2022-12-30 09:05:00
1	2.202	78.258	7.540	4.5002	2022-12-30 09:06:00
2	0.538	3.462	0.000	-0.5423	2022-12-30 09:07:00
3	5.539	228.098	17.363	8.1365	2022-12-30 09:08:00
4	5.475	211.634	14.891	7.3594	2022-12-30 09:09:00
...	...	...	...	...	...
148	5.874	79.617	6.508	1.8878	2022-12-30 11:33:00
149	7.928	68.502	7.569	2.8136	2022-12-30 11:34:00
150	5.397	97.918	18.685	8.3609	2022-12-30 11:35:00
151	24.107	200.612	40.282	5.6664	2022-12-30 11:36:00
152	5.326	31.391	6.283	-0.7555	2022-12-30 11:37:00

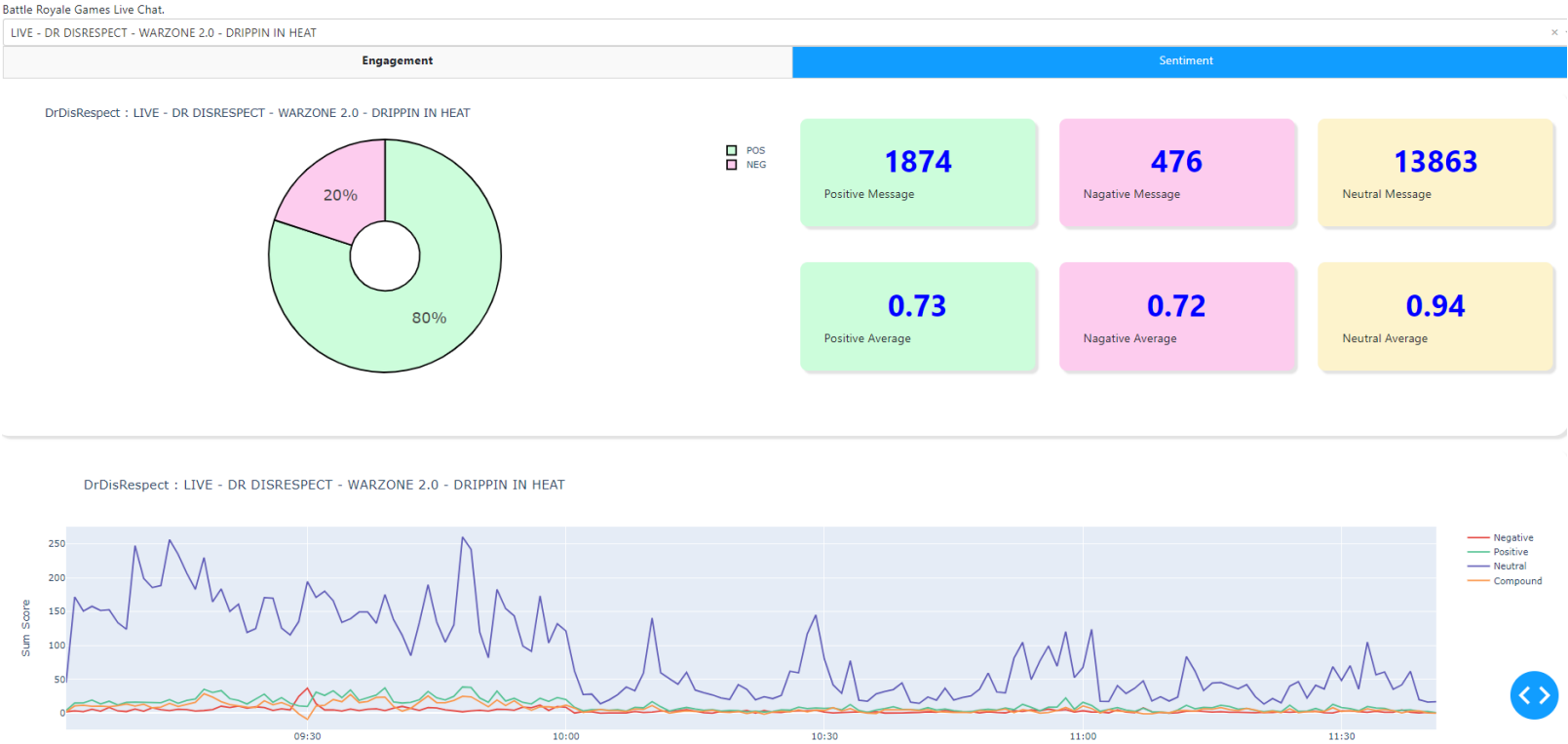
# Dashboard

## Engagement Dashboard



# Dashboard

## Sentiment Dashboard



Sentiment\_Score

Sentiment\_by\_time

# Conclusions on YouTube Chat Analytics of First Person Shooter Game Streamers

- 1. We observed that the chat messages are very active when the players are interacting with users (read out comments, donation and asking opinion of users).
- 2. Engagement in certain period is restricted to member only.
- 3. The chat includes a lot of emojis, most which are site specific (member only emoji).
- 4. Many words in chat are domain-specific (to gaming industry and type of game).
- 5. Almost all messages express sentiment, and the positive sentiment outweighs the negative.

Polarity	Word
Positive	Lol, Yes, Yep, Yeh, haha, EZ, gg, Wow, Champ, Beautiful, nice, sweet, better, <3, Gains
Negative	Empty, Wrong, No, Nah, No, Dead, Nasty, Filthy, Broken



# FORTNITE

## Recommendations

1. In order to have a more accurate assessment of sentimental analysis, we need a domain-specific lexicon for game streaming.
2. Library used should include member-only emoji for more accurate analysis.
3. If we can analyse the amount of donations from users and the numbers of members joining the live stream, it will give us a better assessment on member's loyalty and sentimental analysis.