

Capstone Presentation

Analysis by Derek Steffan



Automated Twitch Highlights

“Analysis” by Derek Steffan





twitch Following Browse Go Turbo

Followed Channels

Follow channels you already watch and discover new ones. Here's a few you might like.

Reyes7878
Overwatch

kuu77
PUB

Sugawana
League of Legends

Online Friends

Participate in battles together. Auto-queue. Promote to see who's online with you!

1 Search via Auto-Follow

Browse

You have instant access to the latest navigation updates on Twitch. Learn More

Games Communities Popular Creative

 League of Legends 111,000 viewers	 Dota 2 110,000 viewers	 PLAYERUNKNOWN'S BATTLEGROUNDS 81,000 viewers	 Grand Theft Auto V 16,219 viewers	 Counter-Strike: Global Offensive 54,877 viewers	 Hearthstone 43,843 viewers	 Overwatch 33,770 viewers	 Heroes of the Storm 27,217 viewers		
 H1 King of the Kill 21,042 viewers	 H123: King of the Kill 21,042 viewers	 Minicraft 20,628 viewers	 World of Warcraft 17,040 viewers	 Poker 16,000 viewers	 IRL 16,314 viewers	 Prey 12,736 viewers	 Talk Shows 11,740 viewers	 Destiny 11,204 viewers	 FIFA 17 11,140 viewers
 SMITE 10,843 viewers	 World of Tanks 9,212 viewers	 Warhammer 40,000: Dawn of War II 7,840 viewers	 Creative 7,810 viewers	 Tom Clancy's Rainbow Six Siege 7,300 viewers	 Arma 3 6,910 viewers	 RuneScape 6,810 viewers	 Dark Souls III 6,201 viewers	 Modern Warfare 2 6,200 viewers	 Rocket League 5,810 viewers

devindak
a Twitch

- Online
- Mobile
- Share my activity
- Share what you're watching, playing, or streaming with your friends.
- Channel
- Video Manager
- Dashboard
- Privacy
- Messages
- Subscriptions
- Watchlist
- Settings
- Router TV Settings
- Switch to old Twitch UI
- Log Out

**How can busy
people keep up
with their favorite
streamers?**

I assume no liability for...

- Feelings hurt
- Sensibilities offended
- Braincells lost

...while reading Twitch chat



Actual picture of Twitch chat

The content of
Twitch chat is
highly correlated to
what is happening
in the broadcast.

0:17  **LIVE_HD TV:** POG

0:17 **Revva1:** pog

0:17  **wayden11:** POGGERS




0:18  **Bowsette_IRL:** POG

0:18   **nerdlyaccurate:** POGGES

0:18 **raubhenxd:** omg

0:18 **HoundLover:** POG

0:18 **natsdogi:** WTF

0:18 **jordan420:**   

0:18 **BeeRumble:** WTFEEEEEEEEEE

0:18 **DemonChilly:** OMG

0:18 **Delire:** Pog

0:18   **Koulla:** RIP PepeHands

Twitch chat “cheering”

0:33  birdlikekaiju: 

0:33  the1big1j96: 

0:34  AnActualApple: LOL

0:34  pazuzu1136: Inception

0:34  x2bytwo:  haha

0:34  Swiftnezz : ahahahah

0:35  liinor: 

0:35  Lunde_00: 

0:35  FALLINGtoGREY: 

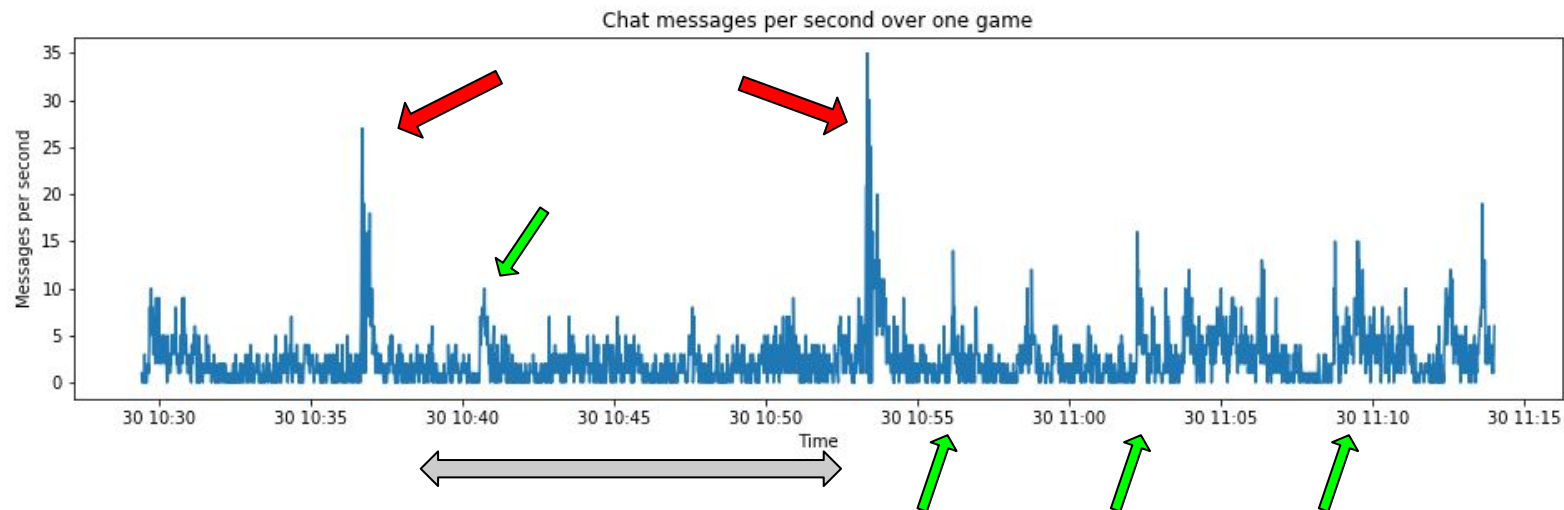
0:35  Mr4ssassin: 

Twitch chat “laughing”



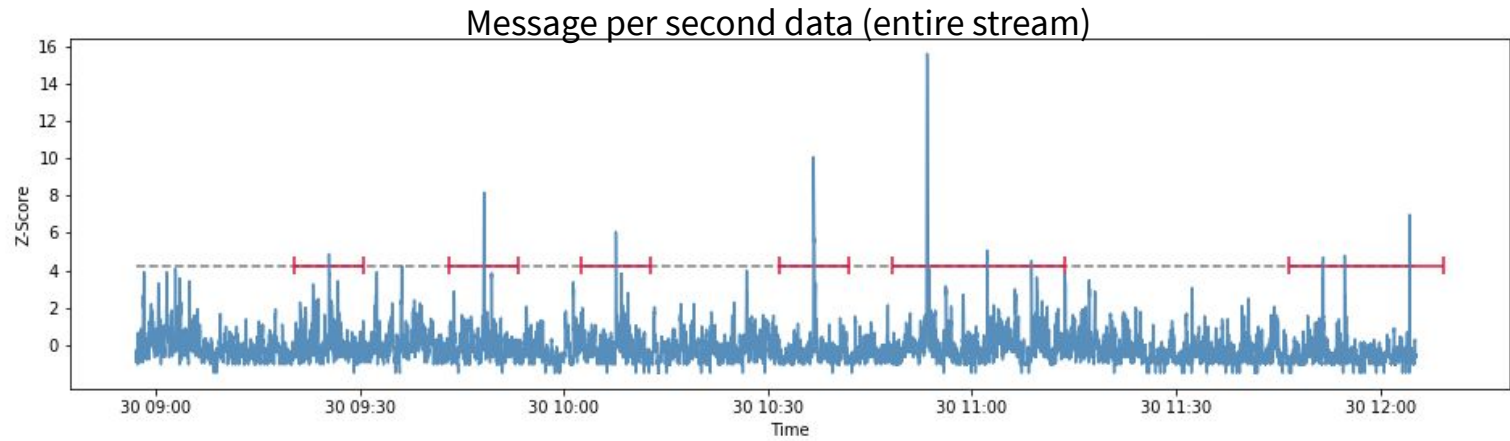
4,000 to 8,000 avg. viewers
~3 chat messages per second

Admiral Bulldog



**Anomalies in chat
activity are caused
by highlights in
gameplay.**

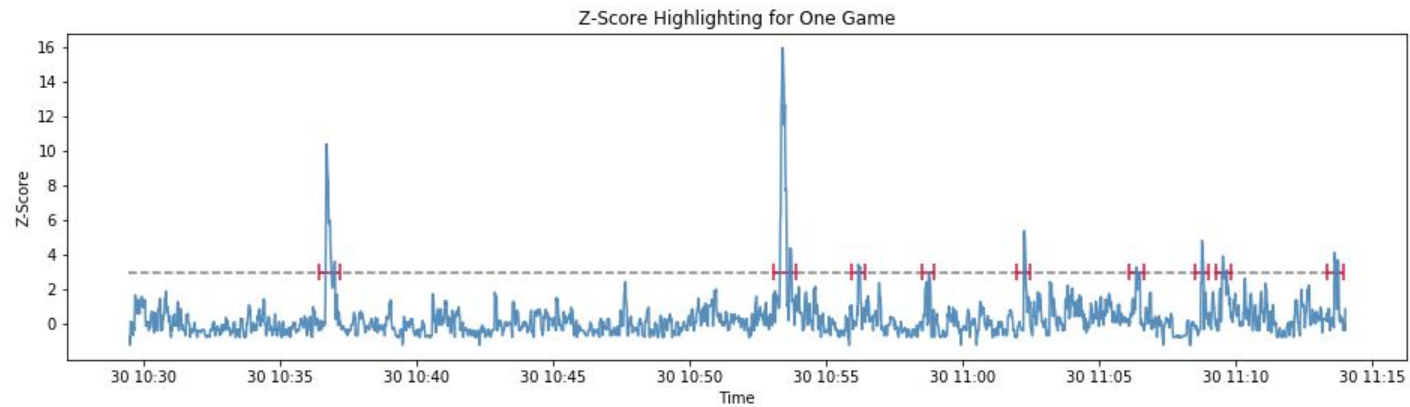
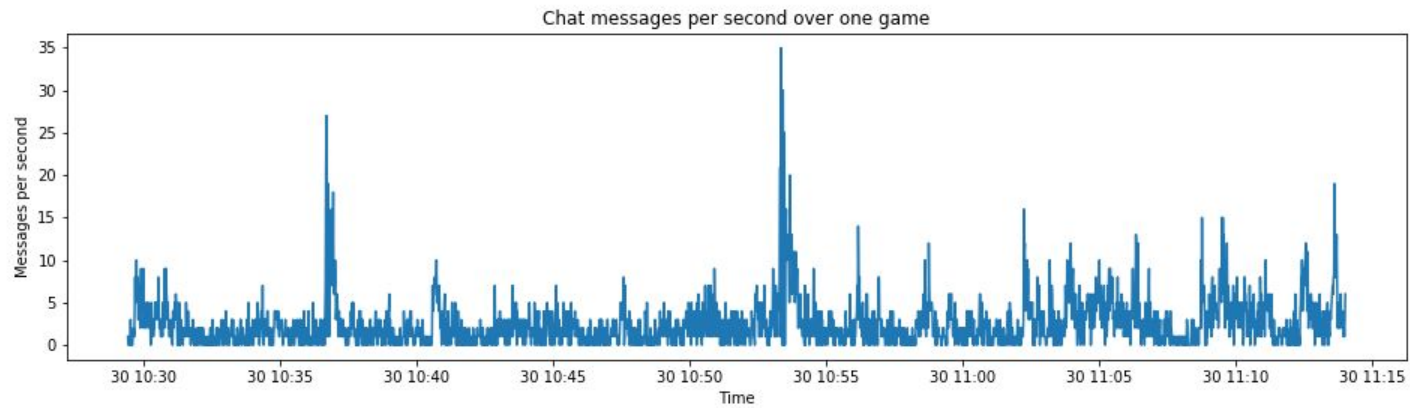
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Intuition

Z-Score Highlighting

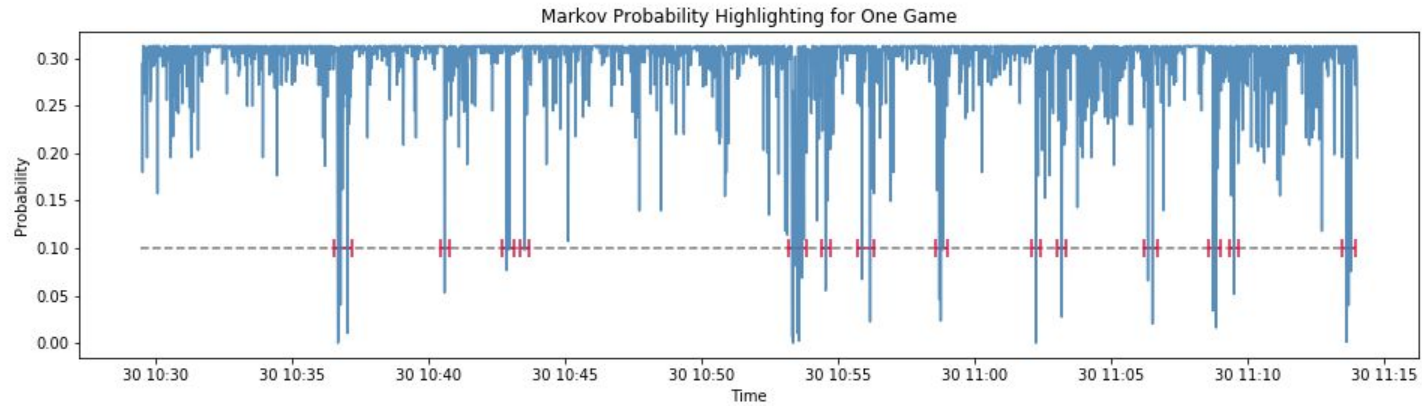
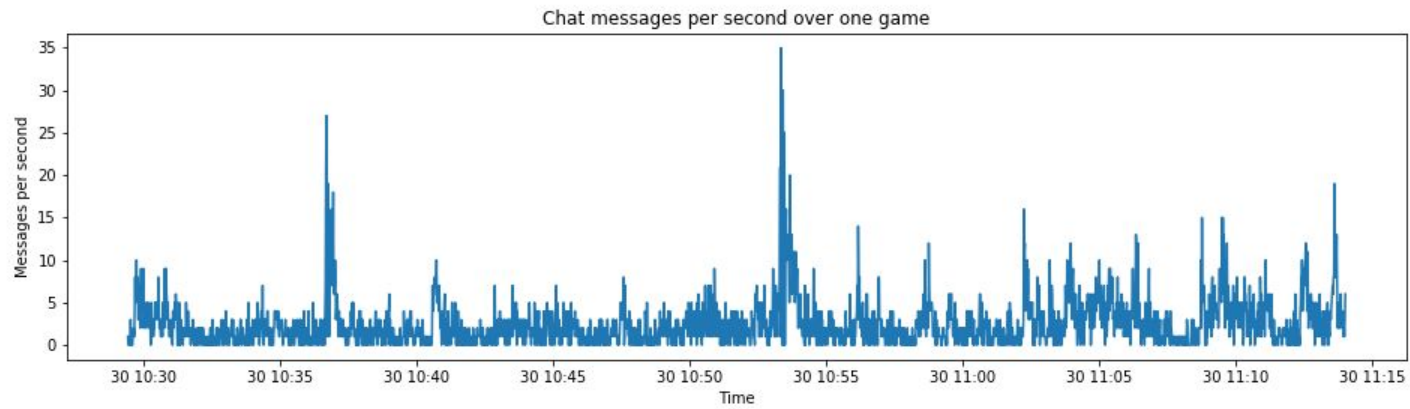




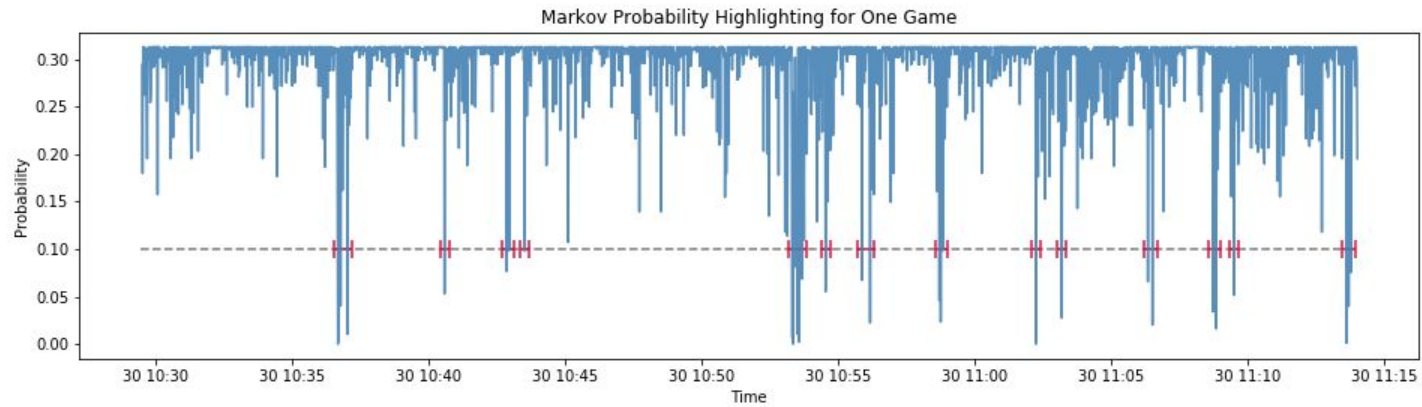
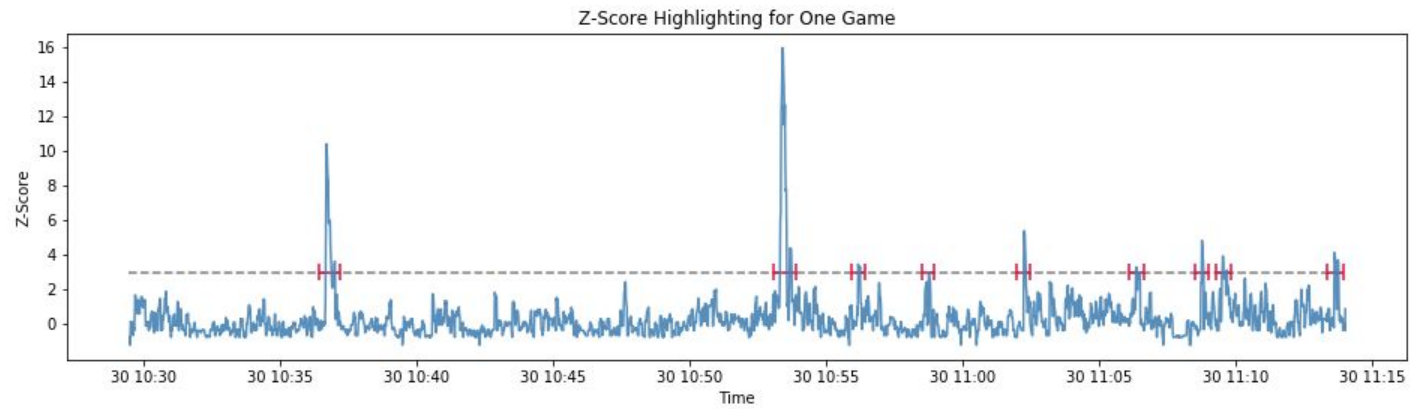
Z-Score Threshold

Markov Probability Highlighting





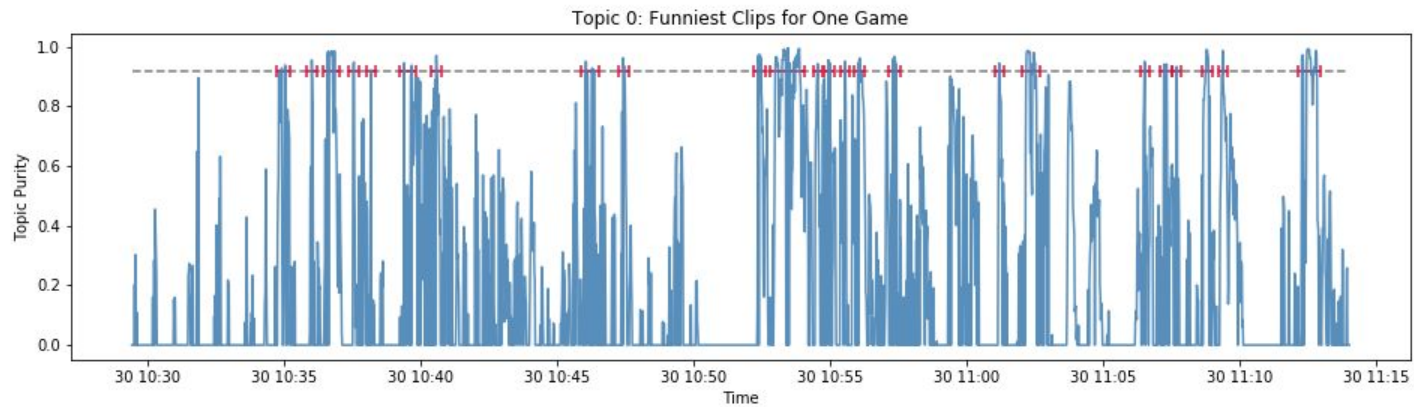
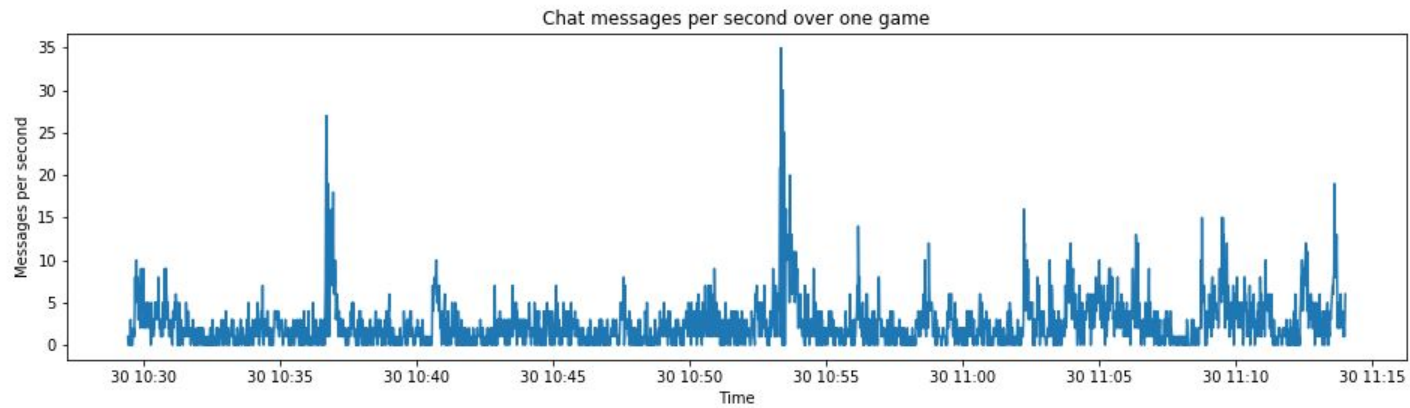
Markov Chain Probability



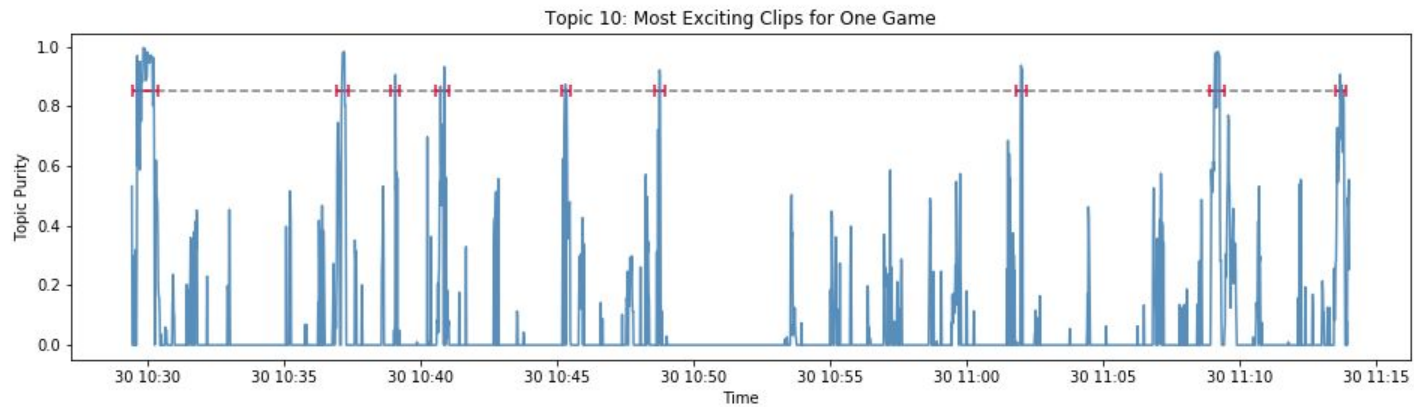
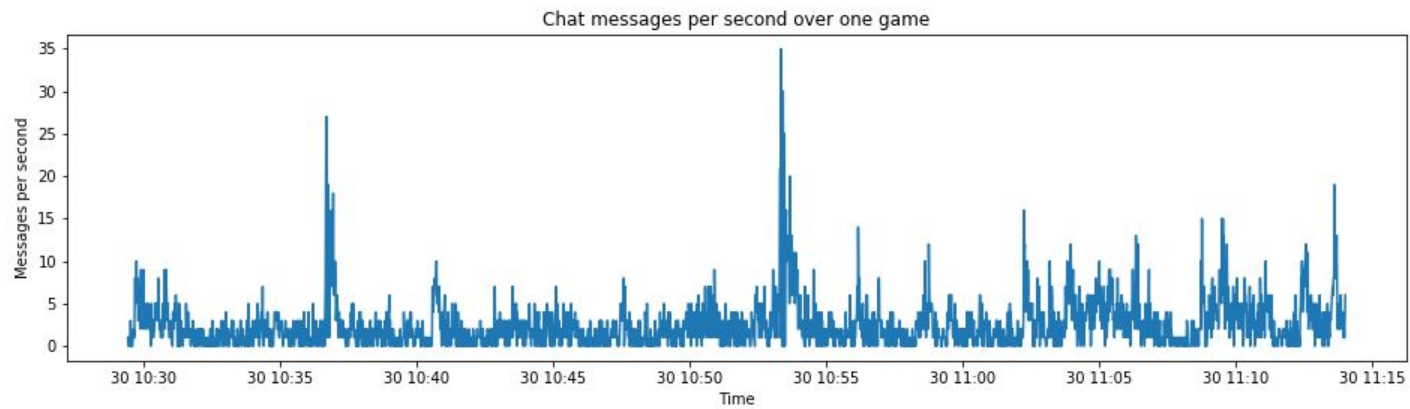
Z-Score vs. Markov Chain

Topic Modeling





Topic Modeling



Topic Modeling

Next Steps



Key Takeaways...

- Streams are long
- Chat reacts to the stream content
- Anomalies are caused by highlights

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Thank you.



