

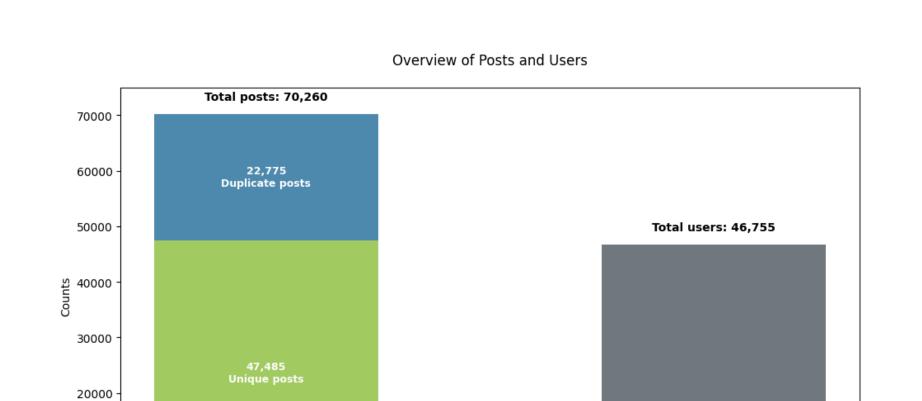
Sentiment

Temporal Analysis

10000

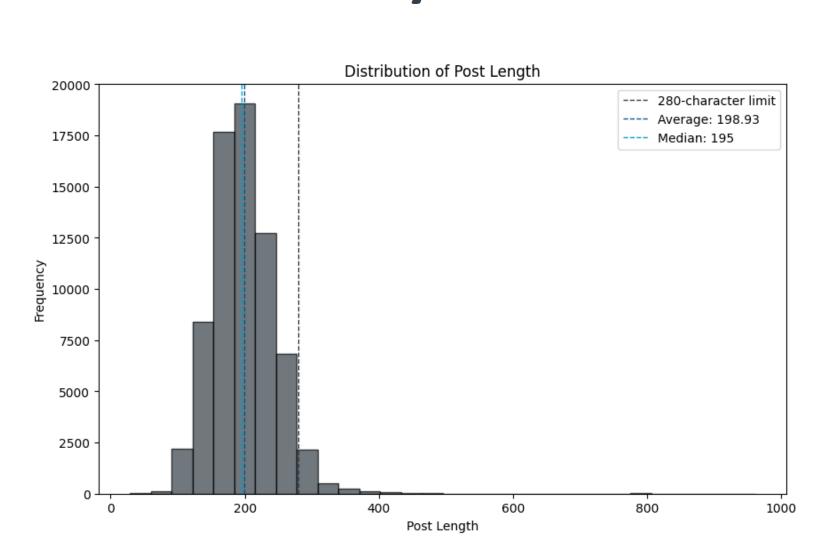
Posts

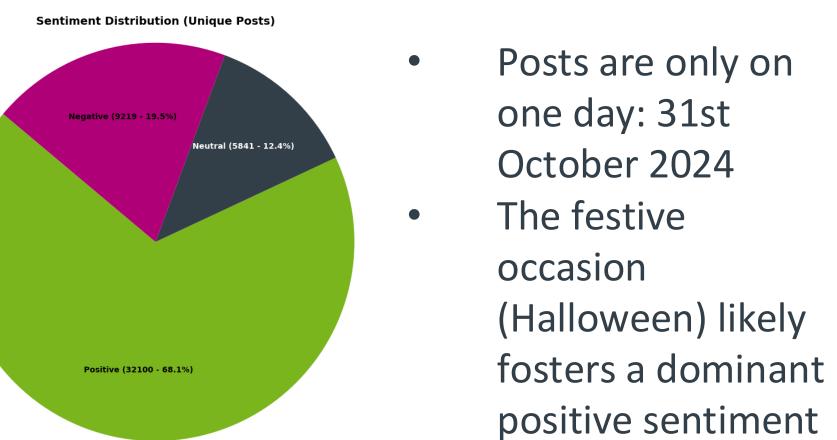
Social Media Analysis Case Study

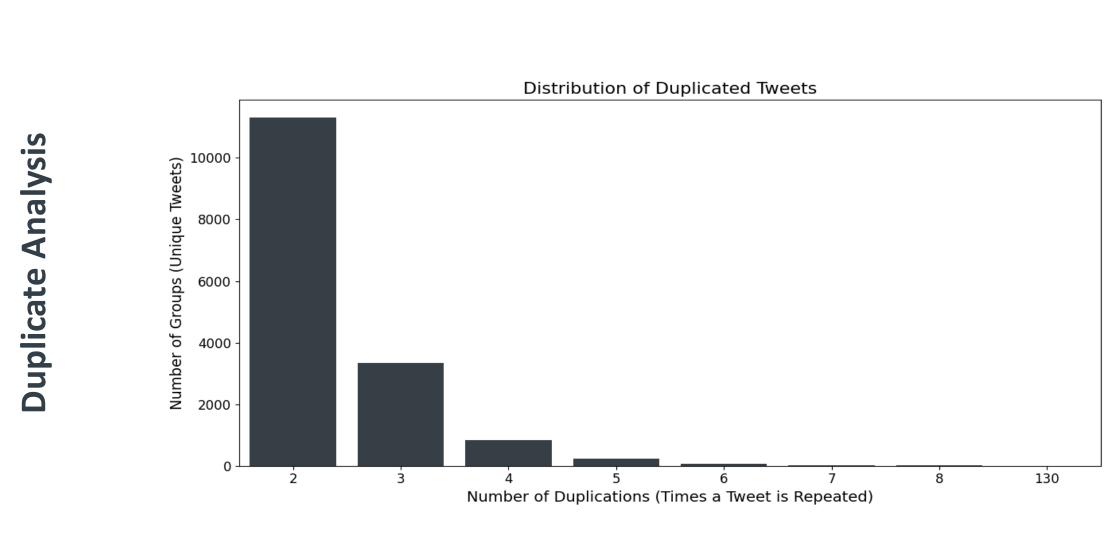


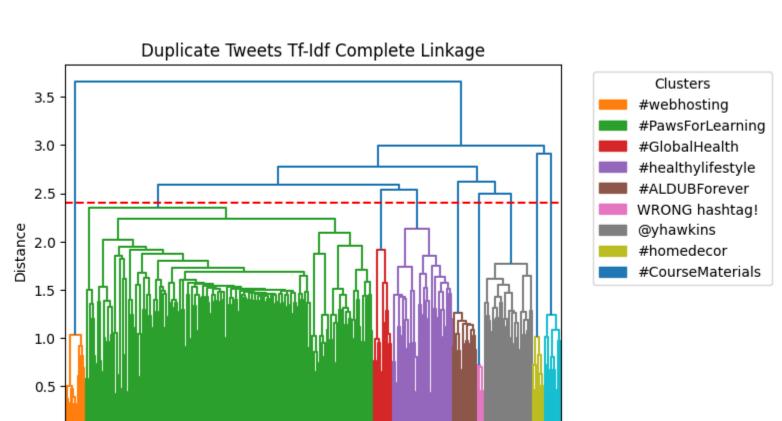
Users





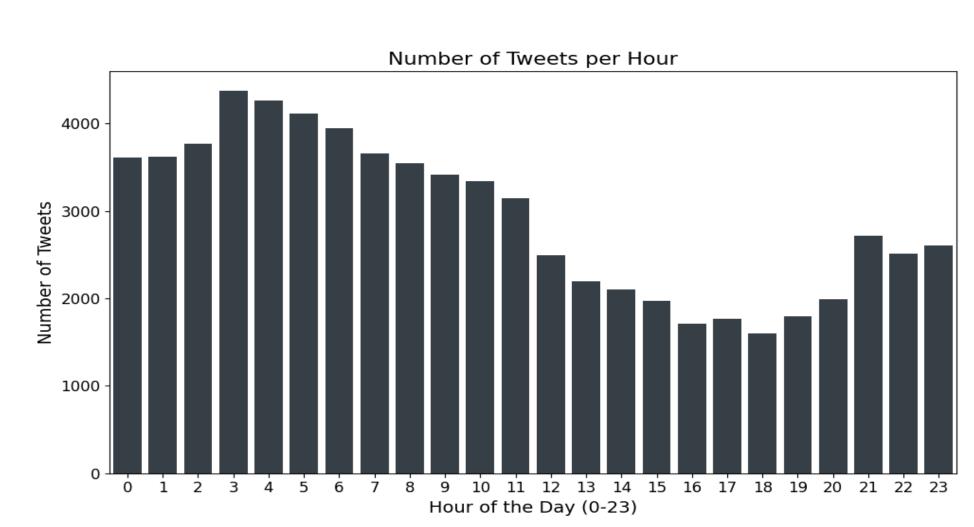


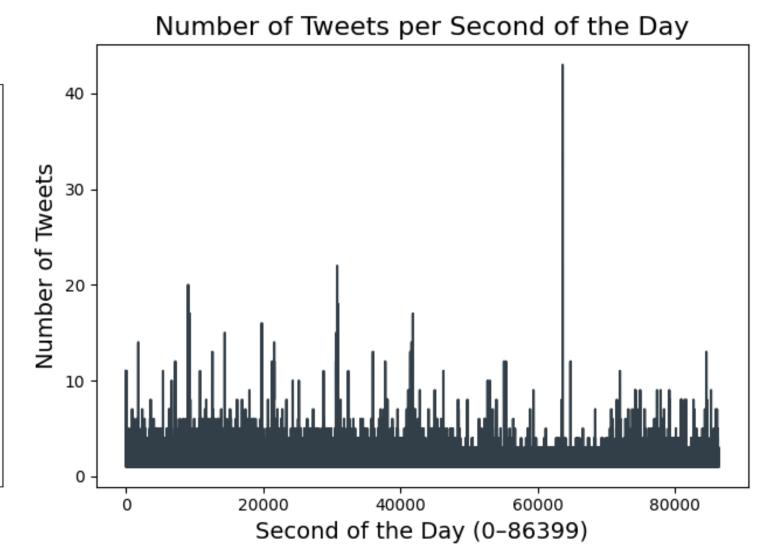




Cluster Spam Duplicates

- Tfidf Text-Clustering with High Number of Duplicates (>5 Tweets)
- Outlier Reference: @yhawkins occurs in 6226 tweets from 70260 total tweets. That is almost 10 %!
- Runtime increases dramatically with increasing number of tweets





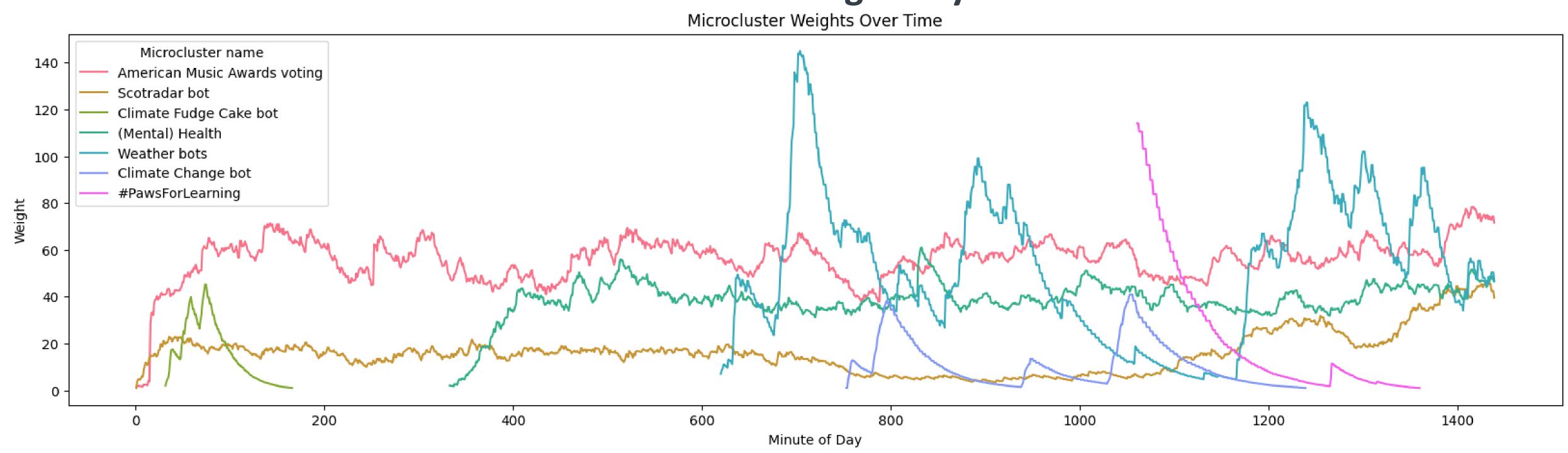
Outlier Post:

"Bring comfort dogs to every university
lecture!

W Let's make our
campuses fluffy again! Join the
movement! #PawsForLearning #UniMS"



Stream Clustering Analysis



Many Bots & Campaigns Recognizable with Stream Clustering

AMA voting: THE ENERGY IS UNSTOPPABLE! VRT to show your support! I'm casting my vote for @yhawkins for #AMAs 2023 Top

Climate Fudge Cake Bot: PRESS RELEASE: Campaigners to deliver giant meter-tall 'climate fudge' cake to County Hall next Tuesday

Climate Fudge Cake Bot: PRESS RELEASE: Campaigners to deliver giant meter-tall 'climate fudge' cake to County Hall next Tuesday

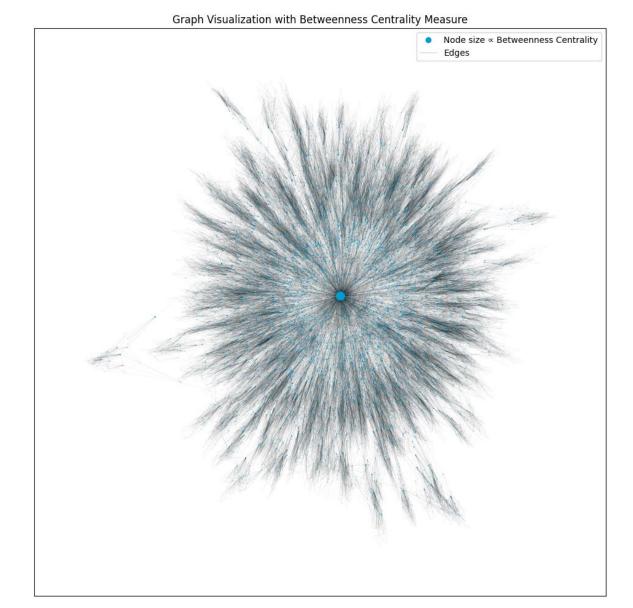
Climate Fudge Cake Bot: PRESS RELEASE: Campaigners to deliver giant meter-tall 'climate fudge' cake to County Hall next Tuesday

Climate Fudge Cake Bot: What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What differences applied a few degrees of global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Climate Finance Change Rets What degrees are global warming make? #Clim

Weather Bots: MANHATTAN KS Oct 31 Climate: High: 82 Low: 46 Precip: 0.0 Snow: M https://t.co/sQg0wpf54b https://t.co/3vHYlliuiY

Owpf54b Climate Change Bot: What difference could a few degrees of global warming make? #ClimateCrisis #ClimateEmergency #ClimateAction ##COP26 #InsulateBritain #Youth4Climate #Climate

User and Network Analysis



Top users	Degree Centrality	Eigenvektor Centrality	Betweenness Centrality	Friendships	Posts
1	3.81 %	0.7059	0.9896	1787	837
2	0.11 %	0.0189	0.0070	53	178
3	0.10 %	0.0183	0.0060	49	134
Mean	0.01 %	0.0007	0.0001	4.05	1.50



Top user: robert78 (id = 1010626427) = Flight Tracker Bot

"••• G-SAJL #LOG77A #Loganair #Embraer ERJ-145 EP From: #NWI Norwich, United Kingdom To: #ABZ Aberdeen Dyce, United Kingdom Alt 24000ft #4007DA Seen 559 Times #ClimateEmergency #ScotRadar #COP26 #COP26Glasgow"

robert78 is part of Community 2, which has topics such as "scotradar", "cop26glasgow", "seen" and "times"

