How has Mastodon usage changed / engagement changed after Twitter takeover

Registrations to Mastodon before/since Twitter takeover

Other ideas

* Who is using Mastodon
* Age and gender
* Region of popularity of Mastodon
* Most often/ trending hashtags

### **Project: Impact Analysis of Twitter's Takeover on Mastodon's Popularity**

#### Goal:

* Investigate how the change in Twitter's ownership influenced user behavior and network growth on Mastodon

#### Sub-Goals

* User Growth Analysis
  + Compare rate of new user registrations on Mastodon 10 months before and after takeover
  + Timeframe we’re looking into:  
    01.01.2022 Beginning of Analysis  
    27.10.2022 Twitter Takeover  
    31.08.2023 End of Analysis
  + Analyze demographic changes in the user base, if possible.
* Engagement Trends, regarding xyz topic:
  + Study the change in posting frequency and user engagement.
  + Identify shifts in peak activity times or days.
* Content Shifts:
  + Analyze the change in popular topics and hashtags.
  + Perform sentiment analysis to understand user reactions to the Twitter takeover.
* Network Dynamics:
  + Examine how the user interaction network evolved.
  + Identify any new communities or clusters that formed post-takeover.

**The following code is referenced here:** <https://jrashford.com/2023/02/13/how-to-scrape-mastodon-timelines-using-python-and-pandas/>

import json

import requests

import pandas as pd

hashtag = 'coffee'

URL = f'https://mastodon.social/api/v1/timelines/tag/{hashtag}'

params = {

'limit': 40

}

since = pd.Timestamp('now', tz='utc') - pd.DateOffset(hour=1)

is\_end = False

results = []

while True:

r = requests.get(URL, params=params)

toots = json.loads(r.text)

if len(toots) == 0:

break

for t in toots:

timestamp = pd.Timestamp(t['created\_at'], tz='utc')

if timestamp <= since:

is\_end = True

break

results.append(t)

if is\_end:

break

max\_id = toots[-1]['id']

params['max\_id'] = max\_id

df = pd.DataFrame(results)