

## Data Analysis Task: Did Fox News influence Donald Trump to talk about immigration?

1. Download the full archive of Trump's tweets until he was suspended from Twitter in January 2021: <https://www.thetrumparchive.com/faq> (either the CSV or JSON are fine)
2. When did Trump start tweeting from an iPhone?
  - a. I recommend using Pandas for this kind of data analysis
3. How many tweets has Trump posted about immigration?
  - a. Consider any tweet that contains the following words (case-insensitive):  
*immigrant, immigrants, immigration*
4. How many of Trump's tweets mention Fox News?
  - a. Consider any of the following accounts mentioned (case-insensitive):  
*@foxnews, @foxandfriends, @oreillyfactor, @seanhannity, @mariabartiromo, @ingrahamangle*
5. How many of Trump's tweets mention the show "The Apprentice"?
  - a. Consider any of the following accounts mentioned (case-insensitive):  
*@apprenticenbc, @celebapprentice*
6. Use Seaborn and/or Matplotlib to plot a time series showing the number of tweets about immigration, Fox News, and The Apprentice **by month** from Jan 2009 - Dec 2020.
  - a. All 3 time series should be in the same figure
  - b. All other design choices are up to you, but try to make the plot as clear and interpretable as possible.
7. Conduct [Granger causality](#) tests to determine if (a) Trump mentioning Fox News is significantly predictive of him tweeting about immigration **in the following month** and (b) Trump mentioning The Apprentice is significantly predictive of him tweeting about immigration in the following month.
  - a. [statsmodels.tsa.stattools.grangercausalitytests](https://statsmodels.tsa.stattools.grangercausalitytests) (use 1 month time lag)
8. Did Fox News influence Donald Trump to talk about immigration? Is our data and Granger causality analysis sufficient to answer this question? Are there other possible explanations of missing information?
  - a. This response can be brief, just a couple of sentences and at most 1 paragraph.