Lab 9: Twitter and Mapping

Turn in a Jupyter Notebook that completes the following:

1. Use the Twitter API to retrieve profile information for Eastern's twitter account (EasternCTStateU)**,** and answer the questions below. If you do not have a developer account, you may load Eastern's user profile from the file 'Eastern.txt'.

    a. Print out a summary of Eastern's account using the following format, where the correct information is extracted from the *tweepy.models.User* object. [10 points]

    Name: (user name)
    Description: (user description)
    Location: (user location)

    b. Print out the following, where 3619 is the number of followers (stored in *followers_count*) and 84 is the number of friends (stored in *friends_count*): [10 points]

    Eastern has 3619 followers and 84 friends

    c. The most recent tweet for a user is stored in the *status* property for that user (e.g., *user.status*), and is a *tweepy.models.Status* object. Print out the text of this tweet (the text may be truncated and will be stored in the *text* property). [10 points]

    Eastern's current status: (text of most recent tweet)

2. Use the Twitter API to search for English-language tweets containing 'Columbus Day'. Set the count to 100 to retrieve 100 tweets (Note: it is possible that slightly less than 100 tweets are returned; this may happen if tweets are deleted). If you do not have a developer account, you may load these results from the file 'Columbus.txt'.

    a. Output the number of tweets retrieved [10 points]
    b. For the first five tweets, output the user name, the full text of the tweet, and the tweet's url (output only this information). [20 points]
    c. For all of the tweets that were retweeted, output the user name, and the number of retweets. If available, also output who the tweet was retweeted from, and the full text of the original tweet. [20 points]

3. Use folium to generate a map with markers on the following: [20 points]

    a. Eastern Connecticut State University

    b. Your hometown: you can lookup latitude and longitude for a particular city here: https://getlatlong.net/. This marker should display 'my hometown' when the mouse hovers over it, and text of the format 'Mary Smith's hometown is Hartford, CT' when the user clicks on the marker.

    c. The map should be centered using the average latitude and average longitude, with an appropriate zoom so that both markers are visible. The latitude average is calculated using the formula

    (latitude of Eastern + latitude of your hometown) / 2

    The calculation for longitude is similar.