Where you followin' me?

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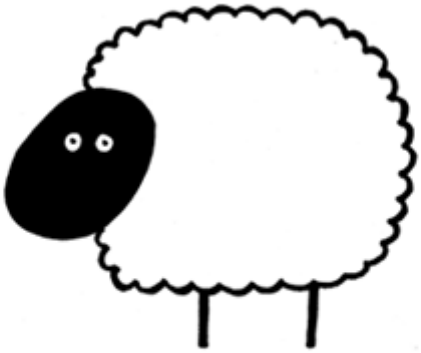

Don't follow me
I haven't got a clue

Subject:

Visual representation on Google Maps of a Twitter user's followers concentration with inclusion of YouTube videos from the city where most of them live.

API used:

- Google Maps: http://code.google.com/apis/maps/index.html
- Twitter: http://dev.twitter.com/doc
- YouTube: http://code.google.com/apis/youtube/2.0/reference.html

Technologies used:

PHP, JSON, JavaScript, AJAX

Preface:

Twitter lets its users set different privacy levels on their online profile. The less strict option makes the profile publicly available, thus accessible even by non registered users.
Every user, in addiction to his friends, can have some followers, that is other users who find interesting what someone tweets and want to follow his publications.
Our goal is to show the concentration of a user's followers on a map and include some videos about the city where most of them live .

Technicalities:

- Twitter does not require API authentication if the user profile to access is public
- PHP has JSON handling built-in functions
- YouTube API require an API key, which is URL-related to from where they are accessed
- For test purposes, we used a friend's Twitter profile, username “gianpaj”, who lives in Dublin
- Our application consists of a single page dynamically modified via JavaScript

Under the bonnet:

The index page initially shows, besides title and logo, only a textbox inside which to insert the username to look for.

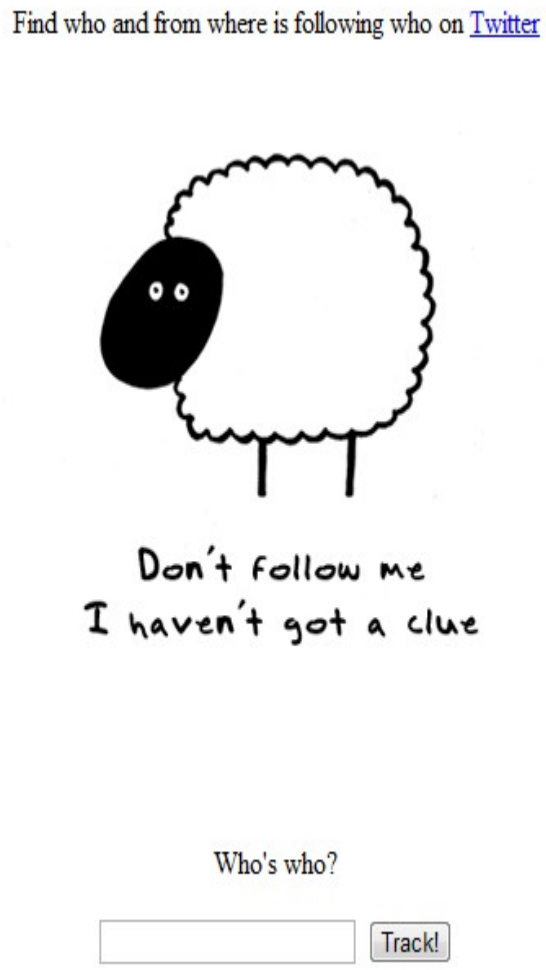

Figure 1: initially rendered index page

Once the username is typed and the Track! button is pressed, the application checks the input and, if everything is right, sends an AJAX request to a php script which calls Twitter's API asking for the user's followers list. When it gets an answer, if it's valid, it extracts the information about the location for each one of the followers and sends them back to the index page.

Shouldn't the user input be valid or shouldn't it be enough to produce an answer, error messages will be shown.

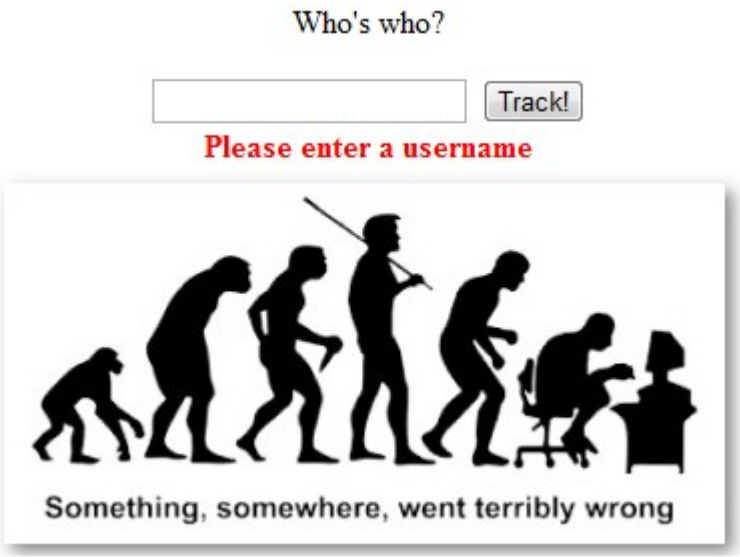

Figure 2: error example when no input is entered

Figure 3: error example when a bad request is formed

When the AJAX response is received, it is processed and the page is updated via JavaScript to show the search result.

Since there's a precise delay (0.87 seconds) which must occur between two sequential Google Maps API queries to avoid errors, loading times are long proportionally to the number of followers. The page informs the user about the issue and shows a nice optical illusion: is the dancer turning clockwise or not?

Figure 4: please, wait

In the meantime, Google Maps APIs are called. When all the information needed are gathered, the top part of the page displays the map which is then updated to show the followers locations. The more follower are in a location, the bigger is the marker; by hovering the cursor upon one of them, a popup informs on how many followers are located in that position.

Figure 5: map with followers locations marked, the bigger the more

Right below the map there's the information about the total number of followers displayed and those that could not be shown since no valid location was set.

Followers displayed: 71
Followers not displayed (set a valid hometown next time!): 21

Figure 6: total number of followers shown and not

At the bottom of the page are then shown some YouTube videos grabbed by contacting the YouTube API about the city where most of the followers live. It is possible to watch them or search for new ones directly from inside the page.

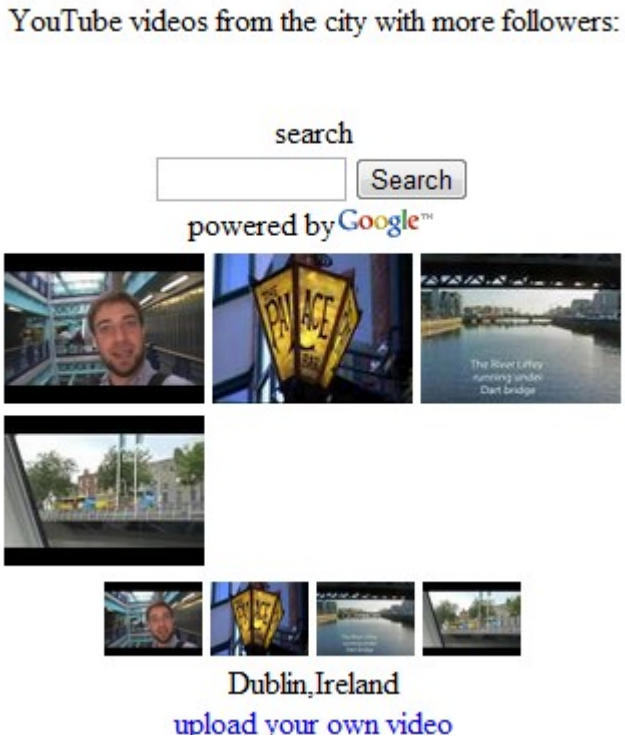

Figure 7: example videos for our test user