# Experiment proposal for
# Mapping the echo-chamber: detecting and characterizing partisan networks on Twitter[*]

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## Background

*"An echo chamber is a metaphorical description of a situation in which beliefs are amplified or reinforced by communication and repetition inside a closed system and insulates them from rebuttal."* - wikipedia

Taking inspiration from this sentence, and the assigned paper, we want to build a model which can find the polarization of the communities inside the network about *Coronavirus* related topics. Indeed, with social media, misinformation about COVID-19, or vaccines, for example, can reach huge audiences and circulate very quickly. Therefore, it is crucial to find ways to recognize reliable information.

## Data & methodology

For the dataset, we will use:

- The "Coronavirus Tweet Ids[1]" dataset from Harvard University, which contains the ids of 239,861,658 tweets related to Coronavirus or COVID-19. All of them collected between March 3, 2020 and June 9, 2020 from the Twitter API using Social Feed Manager;

It will allow us to download the corresponding complete tweets and store them in the most comfortable way for the analysis. Once completed this process, we will perform the following steps:

1. *Build the users graph:*

    - *node* $\Rightarrow$ user;
    - *edge* $\Rightarrow$ interaction or common domain cited (undirected and weighted);

2. Run the *Louvain's method,* used to extract communities from large networks;

3. Check the polarization, which will require to analyze the contents of some tweets in each community, since there is no previous classification for the instances of the dataset;

Once mined, we will devise a model (using Word2Vec) to identify the semantic deviation of each community compared to the global norm, in order to know which subjects or topics are prone to be construed differently by a given echo-chamber.

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[*]http://sbp-brims.org/2017/proceedings/papers/challenge_papers/MappingTheEcho-Chamber.pdf
[1]https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/LW0BTB