A long-term Analysis of Polarization on Twitter

Kiran Garimella*, Ingmar Weber**
*Aalto University/HIIT, **Qatar Computing Research Institute
kiran.garimella@aalto.fi, iweber@hbku.edu.qa

Polarization
- A tendency to be restricted in terms of obtaining or engaging with political information to one side of the left-vs.-right political spectrum
- Recent trends show increase of offline political polarization.

Research Questions
- Has polarization on Social Media increased over the past decade?
- Are users more/less likely to follow both sides of the political spectrum?
- Are users generating more partisan content?

Dataset
- Start with a set of seed political and media accounts
  - Presidential and vice presidential candidates
- Data collected
  - Followers and estimated time of follow (140M)
  - Sample of Retweeters (679,000)
  - All their tweets (more than 2 Billion)

Methodology
- Define measures of polarization
  - Network - Do users follow/retweet both sides of the political spectrum?
  - Content - Do users use hashtags from both sides of the political spectrum?

\[ \text{Lean}(h, w) = \frac{\frac{V_L}{V_L + V_R} + \frac{2}{V_L + V_R}}{\frac{V_L}{V_L + V_R} + \frac{1}{V_L + V_R}} \]

Experiments
1. Follow and Retweet polarization

Dataset and code available at https://users.ics.aalto.fi/kiran/polarizationTwitter/