Twits in Congress: A Study of Social Media Adoption in US Congress by Session

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Topic Overview

- Exploring Twitter Adoption rates by Members of US Congress over time

- Specifically investigate if a Machine Learning Model can be created to accurately predict how Twitter, or other Social Media Platforms, will be adopted in later stages based on early adoption data.
  - Additionally, explore potential trends in contributing factors to a Congressperson's Twitter adoption based on demographics, such as age and Congressional District location, and on how Twitter adoption potentially contributes to re-election

Importance/Relevance of Study

- Evaluate relationship between Social Media and Congressional success/necessity
  - 10 years ago, Twitter was another place for cat pics- now, it has the power to affect policy and world events
  - Can we accurately predict how other Social Media Platforms may be adopted, and with what popularity?
  - How does Social Media itself potentially affect how our Representatives do their jobs?
- Can be applied to non-Twitter alternatives
  - This analytical process, and machine learning model, could also potentially be used to evaluate what platforms a representative would most want to adopt
  - Twitter and Facebook alternatives, especially ones tied to extreme political beliefs, will likely become more widespread and diverse. How should voters best 'follow' their leaders?

Our Data

- Sources:
    - List of Congress Representatives: Congress.gov
    - List of Twitters: Pressgallery.house.gov
    - State Abbreviations: faa.gov
    - Geographic Data: amcharts libraries (https://www.amcharts.com/)
- Specific points of interest:
    - Congressional Tenure
    - Date of Twitter Account Creation (if applicable) compared to the date of the First Tweet (7/15/2006)
    - Congressperson Demographic information
    - Twitter Account information

Research Questions

- Can a Machine Learning Model be created that can **accurately** predict the latter years of Twitter adoption (approximately 2012-2020), after being trained with the early years (approximatey 2006-2012)?
    - If the predictions are inaccurate, what is the cause of those inaccuracies? How could the model be improved to account for these?
- How do demographics contribute to Twitter adoption rates?
    - E.g. did younger Congresspeople adopt Twitter quicker?
- Does Twitter Adoption have any bearing on Re-election?
    - Do representatives with Twitters enjoy longer times in Congress? If so, are there other factors that may contribute to this?