

## **A Digital Democracy: Analyzing Political Sentiments on Reddit during the 2024 Election**

In today's digital age, social media platforms like Reddit offer a unique window into the emotional pulse of society. In July 2024, President Biden's withdrawal from the presidential race marked a turning point in American politics, triggering a wave of reactions on politically charged subreddits such as r/democrats, r/Republican, and r/PoliticalDiscussion. These online forums became vibrant spaces of debate and reflection, capturing a wide array of sentiments and opinions. For a data scientist, this event provides a compelling opportunity to analyze real-world data and uncover patterns in public sentiment. Understanding how online communities react to major political events is not only crucial for comprehending the dynamics of modern discourse but also for evaluating how social media platforms shape public opinion. Researchers have already demonstrated the profound influence of social media on political behavior, with platforms like Reddit and Twitter impacting voter perception and even election outcomes. By analyzing this dataset, you will contribute to a growing body of research that explores the relationship between digital communication and real-world political movements.

Your task is to step into the role of a data analyst and explore how these subreddits reacted to this momentous announcement. By quantifying the emotional tone of posts and comments before and after Biden's decision, you will gain insights into how political communities respond to significant events. This is more than just an exercise in technical skills—it's a chance to connect data science with social dynamics, exploring the power of sentiment analysis to reveal the emotional undercurrents of political discourse.

In this case study, you will work with a dataset of posts and comments scraped from the aforementioned subreddits. Your mission is to clean and prepare this dataset, focusing on content related to Biden's withdrawal. Using the VADER sentiment analysis model, you will assign sentiment scores to these posts and comments, uncovering patterns of positivity, negativity, and neutrality. You will then perform statistical tests to compare sentiment trends before and after the announcement, identifying significant shifts in public emotion. Through this process, you will create visualizations to bring these insights to life and compile a comprehensive report that details your methodology, findings, and interpretations. This project is not only a test of your analytical capabilities but also an opportunity to contribute to our understanding of how major political events shape public discourse. By examining this dataset, you will explore the broader implications of sentiment analysis in the context of social media and politics. Your findings could inspire future studies and serve as a foundation for understanding how online platforms reflect and influence public sentiment during critical moments in history.

All the resources you need to complete this project—including the dataset and code templates—are available in the project repository. Here is the github link: