

#Secim2023 Report: Follower Count Monitoring System

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Introduction

Social media has emerged as a crucial platform for social and political engagement, offering politicians and their supporters a space for exchanging information [1, 2, 3, 4]. Twitter, in particular, has become a vital means of interaction between users and political figures, which is serving for the illumination of political trends [5]. These interactions are multifaceted in nature. In this context of user-politician engagement, a politician's follower count on Twitter serves as a key indicator of their ability to attract more users. Changes in follower trends reveal important aspects of authentic behavior. Abrupt and unusual fluctuations in follower counts can suggest various implications. For instance, a politician may gain more followers after a notable event. Alternatively, a group of social bots may target a politician with the intent to manipulate their standing, or a politician might deliberately employ fake followers to enhance their grassroots reach [3, 6, 7, 8, 9]. In this study, we present platform for monitoring follower counts over time and discuss its potential implications for future research. This topic is becoming increasingly important as the forthcoming Turkish general elections take center stage in discussions surrounding online manipulation. With the decline of mainstream media in Turkey by governments' pressure [10], social media has risen as a significant source of information. In this sense, social media is also becoming a contested source of superficially-inflated followers.

Analysis and Results

Social bots pose an important problem to social media platforms [9, 11]. These are accounts partially or fully controlled by automation software [12, 13]. Sometimes, users provide access to 3rd-party applications to write, share and like content on their behalf and these applications can act without the knowledge of the account's owner [14]. These applications can also automate activities such as following and unfollowing other accounts.

These automation tools are often used to increase visibility and amplify the reach of a content. In this investigation, we will introduce the tool that we developed to analyze the trends in followers changes. During the project, we will regularly release new tools on the detection of fake followers and manipulation of trend topics.

We are tracking the number of followers of political figures through the #Secim2023 dataset [15] that we are compiling as part of our project. Using this dataset we can track changes of followers daily to point to natural or abnormal growth patterns surrounded by important events.

First of all, we must mention a very important point: Gaining and losing followers can happen outside the control of an account. For example, we should consider that all of the following scenarios are possible:

- The account may have purchased followers or engagement from a source.

- Individuals or organizations supporting the account may have purchased followers or engagement without the knowledge of the account owner.
- Followers or engagement may have been created to accuse the account of having fake followers.
- As a result of an event or statement related to the account owner, real followers may have started following or unfollowing the account.

We investigated four exemplary patterns of daily follower changes as shown in Fig 1. All of these examples demonstrate noteworthy changes. Changes observed for Sample #1 may be due to organic engagement following an important external event or inorganic bot engagement. However, Samples #3 and #4 points significant gains and losses and requires additional attention. Also, Sample #2 has consistent growth but those numbers should be investigated with respect to overall follower counts.

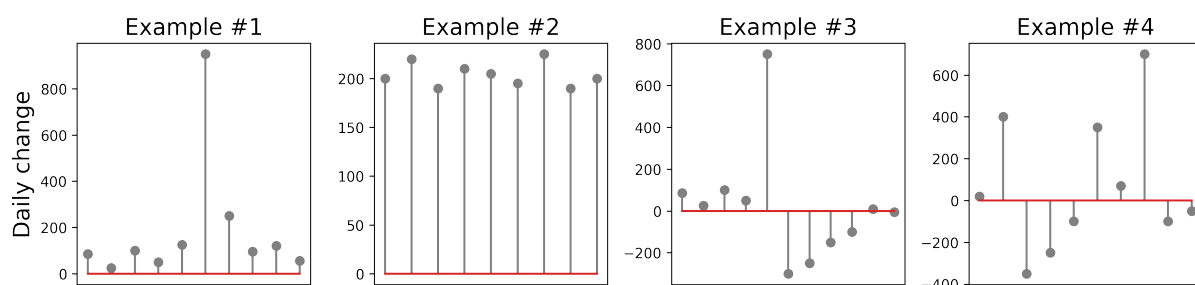


Figure 1: Examples of daily follower change patterns.

To exhaustively analyze all the politician in our dataset, we developed an interactive website¹ using *Altair.js* for data visualization. We update the data in our system frequently since we collect profile details of all politicians daily. The interface provide functions to sort accounts by i) alphabetically, ii) number of followers, iii) total follower change, and iv) minimum and maximum daily changes during the observation period. We can identify interesting instances by sorting highest amount of daily changes.

In Fig. 2, we present two example accounts that has significant increase in a single day. One of the examples (@UlviYonter) gains 224k followers in a single day and this account had 150k followers in total at the time of the analysis (see top chart in Fig. 2). This significant increase is notes worthy and the decrease in followers in the following days may suggest coordinated activity. We also observed that politicians in our dataset gained followers following the disastrous Earthquake in south-east Turkiye. We present @vekilince account as an example and his online activities for his presidential campaign lead gaining more followers.

Discussion

In an effort to foster data literacy among the general public, we have designed an interactive interface that analyzes political figures and their daily follower fluctuations. By examining these trends, we can identify distinct patterns and showcase specific examples. As part of the Secim2023 project, our goal is to create systems that facilitate interactive data analysis, with the follower count monitoring system being the first tool in our platform. Our interface contributes to the existing electoral landscape in two key ways: advancing

¹<http://secim2023.biz/apps/follower-change/>

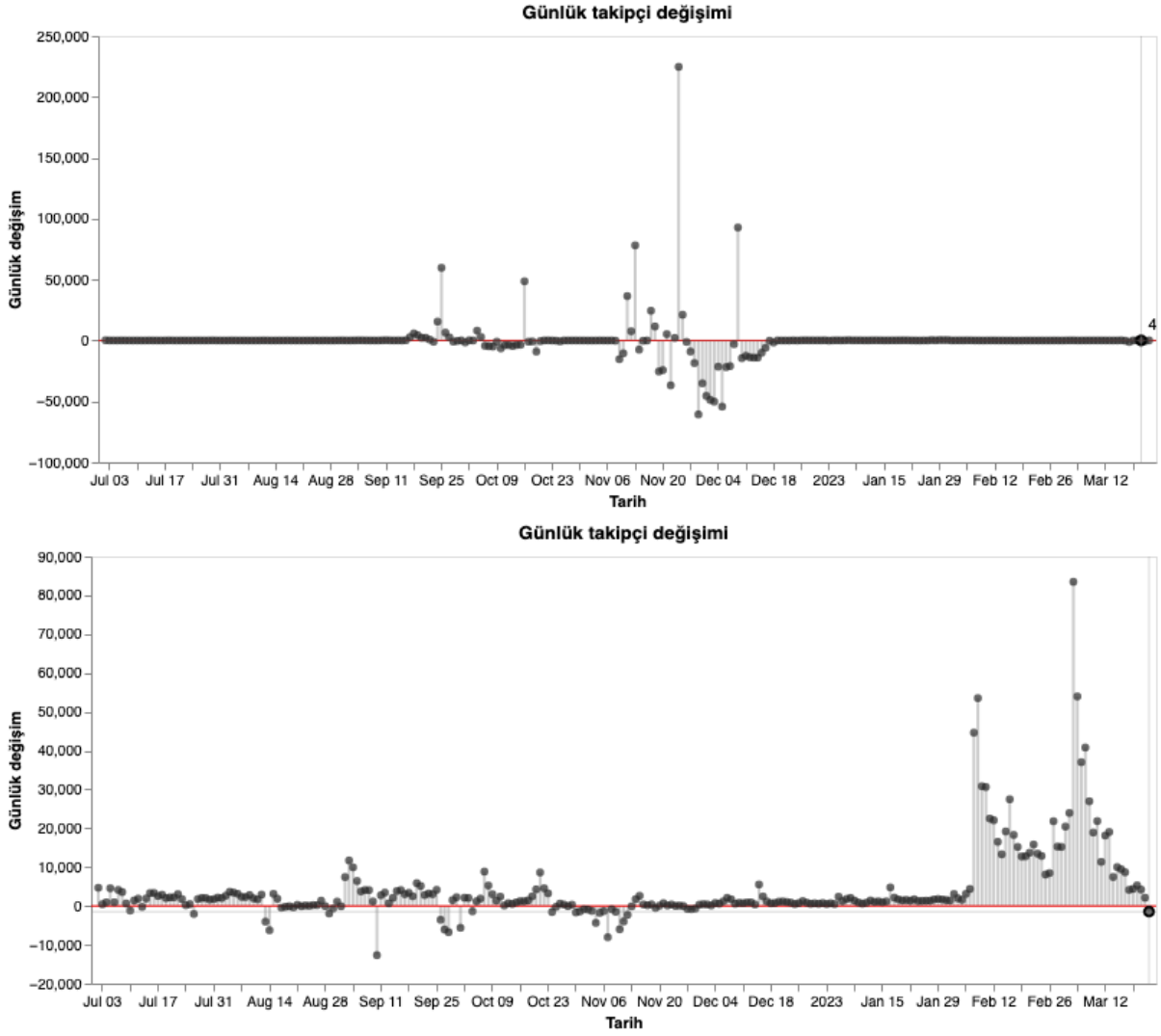


Figure 2: We present daily changes for two social media accounts. Top figure present an anomalous case since the account received more than 220k followers in a single day and lost thousands of followers in the following days. Bottom figure present a politician that capture public attention following the Feb 6th Earthquake and sustain positive growth during his campaign.

academic research and promoting public awareness. On the academic front, researchers and academics can utilize our dataset to conduct their own investigations, leveraging the follower trend mechanisms we've developed. This can lead to new insights and a deeper understanding of the role social media plays in politics. On the public awareness side, our platform allows people to monitor politicians' follower trends and observe how different agendas may influence a politician's follower count, whether it increases or decreases. By making this information publicly available, we hope to generate interest among social media users to be more vigilant about politicians' authentic and inauthentic follower behaviors. Understanding and visualizing politicians' follower trends is important for several reasons. It can reveal how public opinion shifts in response to various events and policy proposals, and it can highlight potential manipulation tactics, such as the use of fake followers or bots. Additionally, tracking these trends can help uncover the effectiveness of political messaging and communication strategies, ultimately leading to a more informed and engaged electorate.

Contributions

All VRL lab members contributed to the discussions. OV conceived and planned the research, contributed to data collection, analysis, and report writing. YZ analyzed the data and prepared interactive visualizations. NM contributed data analysis, literature review and writing.

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