Twitter Following Communities
and Viral Presidential Election Hashtag Use

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Introduction

We investigated the spread of viral 2020 U.S. Presidential Election related hashtags on the Twitter platform in the days just before and after election day. These tweet data were used to construct a network of Twitter interactions where community detection was applied to help predict hashtag spread. The hashtags tracked included, but were not limited to, #Trump2020, #Biden2020, #Election, and #MAGA.

Materials & Methods

Twint Twitter Scraper

We scraped the Twitter platform for all tweets containing at least one of a selection of viral hashtags between 11/01/2020 and 11/08/2020. These data were used to identify users who tweeted a viral election related hashtag, whose data was then used to construct a Twitter interaction network based on these hashtags. Specifically, followers were gathered for those who tweeted at least one of our tracked hashtags and a follower network constructed from these data.

Community Analysis

We applied network community detection algorithms to the aforementioned network with edges defined as follower relationships. The primary consideration for the current stages of our project was how topological community structure compared to hashtag usage found in the tweet metadata. In our preliminary results we utilized descriptive statistical measures (see figures). Louvain was the primary detection method.

Results & Discussion
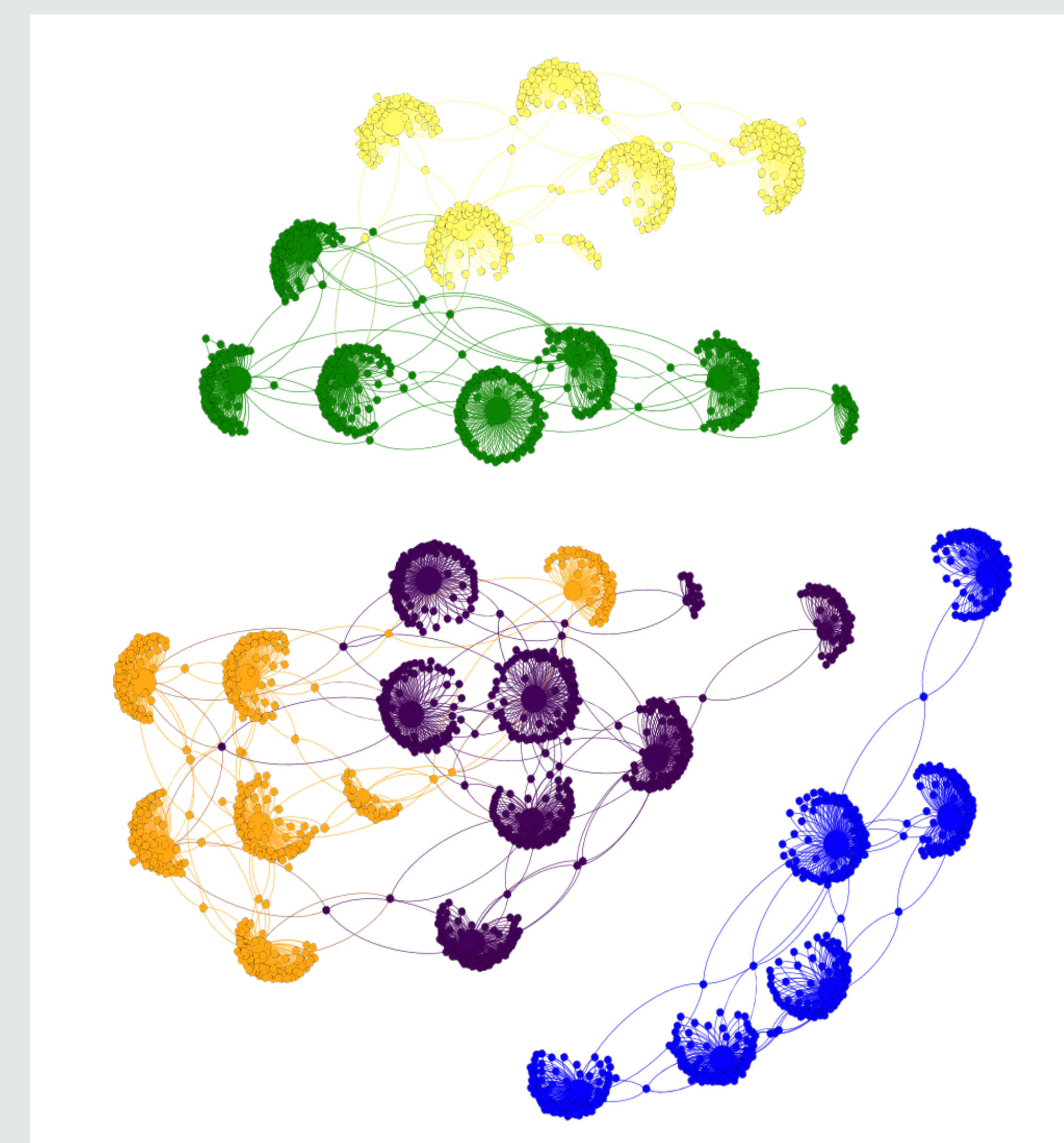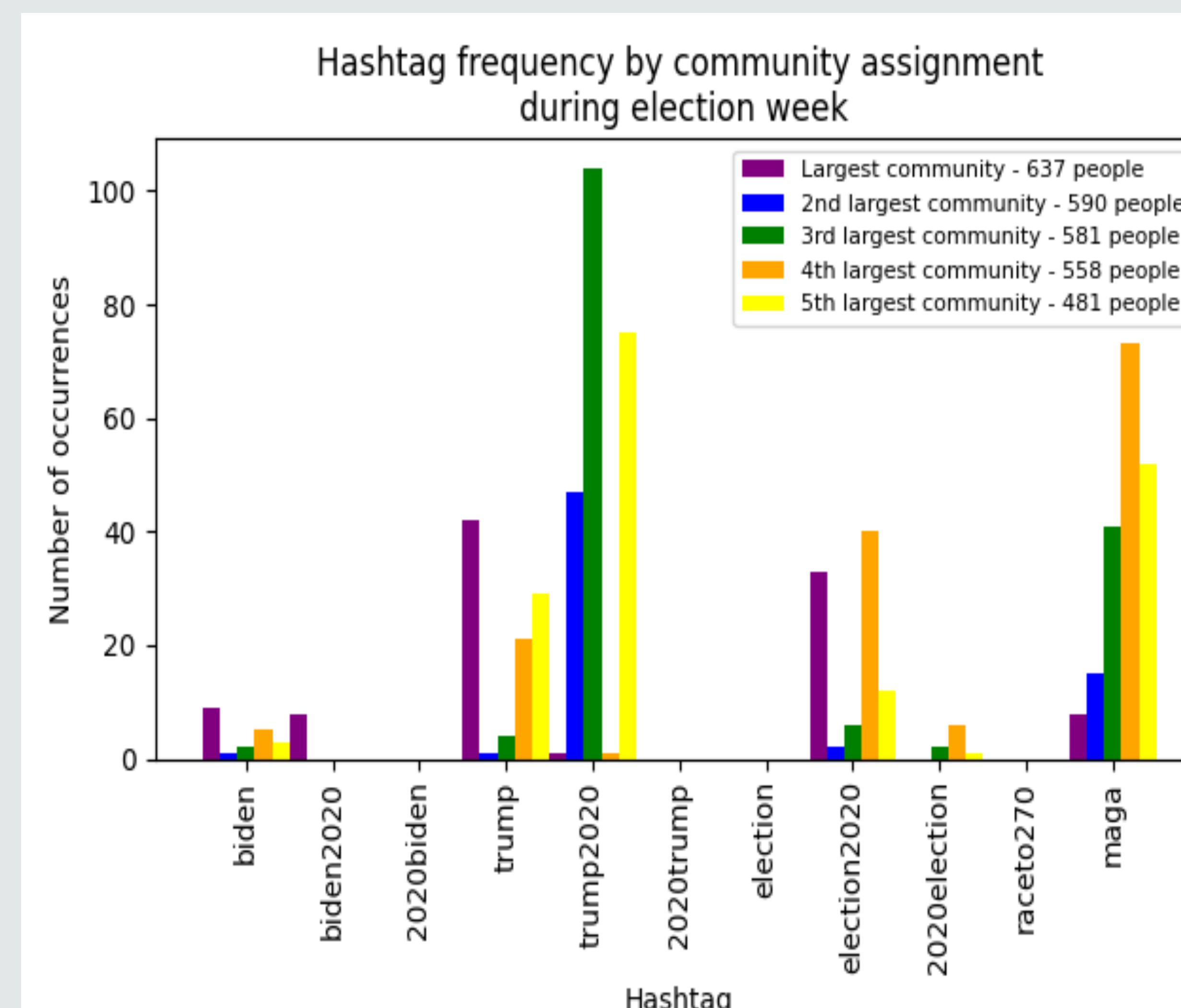
Discussion

Amongst top five populous communities of followers, politically left-leaning hashtags were less popular. Generally, the most populous communities prefer politically right-leaning hashtags. Within each community, except the largest, there was a skewed structure towards either the political left or right. There is seemingly strong "hub structure" within each community, indicating the presence of power-law distributed reciprocal following. This may suggest bot activity.

Conclusions

While results are preliminary, the data seems to suggest those who tweet left-leaning hashtags are both less centralized and less connected by the Twitter 'following' mechanism. In the future, we hope to expand our analysis to a larger collection of tweets and Twitter users.

References

Reference 1.

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