1. Introduction

President Donald Trump (“Trump”) has transformed the social media usage of the presidency with his Twitter presence. He is known not only for the impassioned content of his tweets but also for the frequency. Much of the existing analysis on his Twitter use has focused on the contents of his tweets, such as the subject matter,[[1]](#footnote-1) tone,[[2]](#footnote-2) and coincidence[[3]](#footnote-3) with topics raised in other news outlets. Comparatively less has been written about the “metadata” of his tweets, notably the amount of time elapsing between them. When to expect the next Twitter outburst is a frequent topic of speculation among presidential observers, and a better understanding of this frequency is needed. In this study, we aim to determine the time elapsed between twitter outbursts (“tweet storms”) and how this behavior differs from before and after the election.

We pulled our data directly from Trump’s Twitter feed.

This study is organized as follows: Section 2 discusses the methods used in analyzing Trump’s tweet storms. Section 3 describes **INSERT RESULTS STATEMENT**. Section 4 describes **INSERT DISCUSSION STATEMENT**.

What’s the probability you have at least one day in between tweet storms?

How much time elapses between tweet storms?

Training same models on pre- and post-election data and seeing if credible intervals and coefficients overlap.

See how his behavior has changed based on the election

Can we use pre-election data to predict the post-election data? Have his Twitter patterns changed post-election?

1. Methods

We assume that President Trump’s tweet storms, , are iid Weibull with parameters and , and thus our likelihood has the form

We select the noninformative prior for our parameters, thus

Thus, our full posterior distribution is

This posterior results in a full conditional for of

and a full conditional for of

We use the pre-election data as a training set for our model and validate it with the post-election data. We create a replicate dataset from the pre-election data to compare with the validation set.

In addition to using the Weibull distribution, we also **PUT WHAT OTHER MODELS WE WANT TO USE HERE**

1. Results

In the results section, you present the results of your analysis. This section should contain statements of the results of the models and may also include tables or figures if relevant. If a figure or table is included, they must be labeled and referred to as Table 1 and Figure 1 in the text. Here we just describe what we see in the analysis. If we conducted a sensitivity analysis and varied our priors or likelihoods, we also comment on those results here.

1. Discussion

The discussion section is where you interpret the results of the analysis in context and offer conclusions along with possible limitations of the analysis. This section does not necessarily have to be very long, but you should be sure to properly wrap up the report.

1. Appendix A (should be code)
2. Appendix B (only if we need the space, for model derivations) – I figure here we could put the work for each of our models, sound good?

**GAMMA**

**LOG NORMAL**

1. Buzzfeed News, “All The President’s Tweets — And Every Lawmaker’s Too”, Jan 23 2018, <https://www.buzzfeed.com/peteraldhous/trump-twitter-wars>. [↑](#footnote-ref-1)
2. Variance Explained (blog), “Text analysis of Trump's tweets confirms he writes only the (angrier) Android half”, Aug 9 2016, <http://varianceexplained.org/r/trump-tweets/>. [↑](#footnote-ref-2)
3. Politico, “I’ve Studied the Trump-Fox Feedback Loop for Months. It’s Crazier Than You Think”, Jan 5 2018,

   <https://www.politico.com/magazine/story/2018/01/05/trump-media-feedback-loop-216248>. [↑](#footnote-ref-3)