# Abortion is More Popular than Your Favorite Politician\*

My subtitle if needed

Talia Fabregas

November 30, 2024

First sentence. Second sentence. Third sentence. Fourth sentence.

#### 1 Introduction

Overview paragraph Goal is learn why those who voted Democrat at the top of the ticket are more likely to vote down-ballot than those who voted Republican at the top of the ticket.

Estimand paragraph

Results paragraph

Why it matters paragraph In the 2024 election, Democratic Senate candidates (both incumbent and non-incumbent) were elected in states that President-Elect Trump carried: Michigan, Wisconsin, Nevada, and Arizona. In Nevada and Wisconsin, Senators Jackie Rosen and Tammy Baldwin

Telegraphing paragraph: The remainder of this paper is structured as follows. Section 2....

#### 2 Data

#### 2.1 Overview

We use the statistical programming language R (R Core Team 2023).... Our data (Schaffner, Ansolabehere, and Shih 2023).... Following Alexander (2024), we consider...

Overview text

<sup>\*</sup>Code and data are available at: https://github.com/taliafabs/US-Midterms-2022.git.

#### 2.2 Measurement

Some paragraphs about how we go from a phenomena in the world to an entry in the dataset.

#### 2.3 Outcome variables

Add graphs, tables and text. Use sub-sub-headings for each outcome variable or update the subheading to be singular.

Some of our data is of penguins (?@fig-fig1), from ...

Talk more about it.

Talk way more about it.

#### 2.4 Predictor variables

Add graphs, tables and text.

Use sub-sub-headings for each outcome variable and feel free to combine a few into one if they go together naturally.

#### 3 Model

The goal of my modeling strategy is twofold. Firstly, I want to The goal of our modelling strategy is twofold. Firstly,...

Here we briefly describe the Bayesian analysis model used to investigate... Background details and diagnostics are included in Appendix C.

#### 3.1 Model set-up

Define  $y_i$  as the number of seconds that the plane remained aloft. Then  $\beta_i$  is the wing width and  $\gamma_i$  is the wing length, both measured in millimeters.

$$\begin{aligned} y_i | \pi_i &\sim \text{Bern}(\pi_i) \end{aligned} \tag{1} \\ \text{logit}(\pi_i) &= \beta_0 + \beta_1 \times presvote2020_i + \beta_2 \times educ_i + \beta_3 \times trust_i + \beta_4 \times know\_us\_house_i \end{aligned} \tag{2} \\ &+ \beta_5 \times know\_us\_senate_i + \beta_6 \times political\_interest_i \end{aligned} \tag{3} \\ \beta_0 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{4} \\ \beta_1 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{5} \\ \beta_2 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{6} \\ \beta_3 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{6} \\ \beta_3 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{7} \\ \beta_4 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{8} \\ \beta_5 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{9} \\ \beta_6 &\sim \text{Normal}(0, 2.5) \end{aligned} \tag{10} \end{aligned}$$

We run the model in R (R Core Team 2023) using the rstanarm package of Goodrich et al. (2022). We use the default priors from rstanarm.

#### 3.1.1 Model justification

We expect a positive relationship between the size of the wings and time spent aloft. In particular...

We can use maths by including latex between dollar signs, for instance  $\theta$ .

#### 3.2 Model Weaknesses and Limitations

Trained using a random subset of the data. Refer to codebook about the risks of that.

#### 4 Results

The results are summarized in Appendix C.1.

#### 5 Discussion

#### 5.1 First discussion point

If my paper were 10 pages, then should be be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

## 5.2 Second discussion point

Please don't use these as sub-heading labels - change them to be what your point actually is

## 5.3 Third discussion point

## 5.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

## **Appendix**

## A Surveys, Sampling, and Observational Data

- A.1 Deep Dive into CES Methodology
- A.1.1 Sampling Method
- A.1.2 Weighting
- A.1.3 Verification
- A.1.4 Weaknesses and Limitations
- A.2 Second Point: Idealized Survey Methodology to Study 2024 Down-Ballot Voter Attrition
- A.3 Social Desirability Bias and Identifying Non-Voters
- B Additional data details
- **B.1** Data cleaning
- C Model details
- C.1 Model Results

The model summary is shown in Table 1.

#### C.2 Posterior predictive check

In **?@fig-ppcheckandposteriorvsprior-1** we implement a posterior predictive check. This shows the comparison of the outcome variable *vote\_2022*, with simulations from the posterior distribution (Alexander 2024).

In **?@fig-ppcheckandposteriorvsprior-2** we compare the posterior with the prior. This shows...

Examining how the model fits, and is affected by, the data

Table 1: Explanatory model of voter turnout in 2022 U.S. midterm elections based on  $\dots$ 

	Voter Turnout Model
(Intercept)	-0.79
	(0.21)
presvote2020Joe Biden	0.24
	(0.08)
$age\_bracket30-44$	0.55
	(0.10)
$age\_bracket 45-59$	1.16
	(0.11)
$age\_bracket60+$	1.79
	(0.11)
educ4-year college degree	0.36
	(0.11)
educHigh school graduate	-0.27
	(0.12)
educNo HS	-1.01
	(0.17)
educPost-grad	0.42
	(0.13)
educSome college	0.10
trustfedA great deal	(0.12)
	-0.86
	(0.13)
trustfedNone at all	0.35
	(0.11)
trustfedNot very much	0.39
	(0.08)
truststateA great deal	-0.07
	(0.11)
truststateNone at all	0.15
	(0.10)
truststateNot very much	-0.07
	(0.08)
know_us_houseYes	0.36
	(0.07)
know_us_senateYes	0.02
	(0.06)
political_interestMost of the time	0.28
	(0.15)
political_interestNo	-1.07
	(1.12)
political_interestOnly now and then	-0.32
	(0.17)
political_interestSome of the time	[0.00]
	(0.16)
Num.Obs. 6	7500
R2	0.134
Log.Lik.	-3270.706
WAIC	-3270.700 $6606.0$
RMSE	0.42
TUMUT	0.44

## C.3 Diagnostics

Figure 1a is a trace plot. It shows... This suggests...

Figure 1b is a Rhat plot. It shows... This suggests...

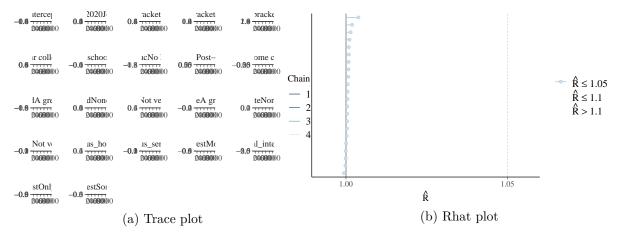


Figure 1: Checking the convergence of the MCMC algorithm

### References

- Alexander, Rohan. 2024. Telling Stories with Data. "University of Toronto". https://www.tellingstorieswithdata.com.
- Goodrich, Ben, Jonah Gabry, Imad Ali, and Sam Brilleman. 2022. "rstanarm: Bayesian applied regression modeling via Stan." https://mc-stan.org/rstanarm/.
- R Core Team. 2023. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.
- Schaffner, Brian, Stephen Ansolabehere, and Marissa Shih. 2023. "Cooperative Election Study Common Content, 2022." Harvard Dataverse. https://doi.org/10.7910/DVN/PR4L8P.