

# My title\*

My subtitle if needed

First author

Another author

November 4, 2024

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

## 1 Introduction

Overview paragraph

Estimand paragraph

Results paragraph

Why it matters paragraph

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 (Toronto Shelter & Support Services 2024).... Following Alexander (2023), we consider...

Overview text

### 2.2 Measurement

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

---

\*Code and data are available at: [https://github.com/RohanAlexander/starter\\_folder](https://github.com/RohanAlexander/starter_folder).

## 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 (Figure 1), from Horst, Hill, and Gorman (2020).

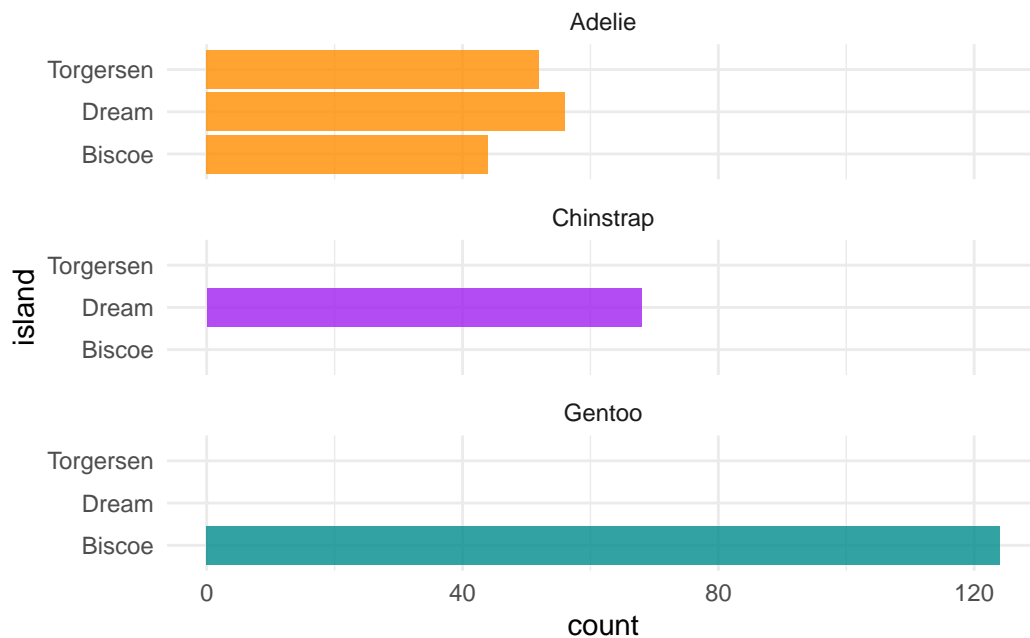


Figure 1: Bills of penguins

Talk more about it.

And also planes (?@fig-planes). (You can change the height and width, but don't worry about doing that until you have finished every other aspect of the paper - Quarto will try to make it look nice and the defaults usually work well once you have enough text.)

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 our modelling strategy is twofold. Firstly,...

Here we briefly describe the Bayesian analysis model used to investigate... Background details and diagnostics are included in [?@sec-model-details](#).

### 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.

$$y_i | \mu_i, \sigma \sim \text{Normal}(\mu_i, \sigma) \tag{1}$$

$$\mu_i = \alpha + \beta_i + \gamma_i \tag{2}$$

$$\alpha \sim \text{Normal}(0, 2.5) \tag{3}$$

$$\beta \sim \text{Normal}(0, 2.5) \tag{4}$$

$$\gamma \sim \text{Normal}(0, 2.5) \tag{5}$$

$$\sigma \sim \text{Exponential}(1) \tag{6}$$

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  $\theta$ .

## 4 Results

Our results are summarized in [Table 1](#).

Table 1: Explanatory models of flight time based on wing width and wing length

	First model
(Intercept)	1.12 (1.70)
length	0.01 (0.01)
width	−0.01 (0.02)
Num.Obs.	19
R2	0.320
R2 Adj.	0.019
Log.Lik.	−18.128
ELPD	−21.6
ELPD s.e.	2.1
LOOIC	43.2
LOOIC s.e.	4.3
WAIC	42.7
RMSE	0.60

## 5 Discussion

### 5.1 Have the Polls finally caught up to Trump?

How voters turn out for Kamala Harris is yet to be seen, but the data on Trump is becoming pretty evident. The best predictor of future elections is past elections, and with Donald Trump, we now have two election cycles to go off of. In both, Trump vastly over-shot the mainstream poll's projections, projected to lose big both times; in 2016, he overcame pre-election polls due to his unforeseen success with non-college-educated white men and women, and in 2020, he made gains in the female and Hispanic voter shares narrowly losing when he was projected to lose in a landslide. Trump found success by connecting with groups of voters who were not very politically engaged, did not always vote, and certainly did not complete pre-election surveys. One key difference between polls today and 2016 is accounting for education level. Trump found his "silent" voters by motivating mostly white non-college graduates, who were disproportionately likely to fill out a survey in comparison with college-educated voters, skewing the polls towards Clinton. Other changes pollsters are continuing to make are changing the weights given to an individual survey respondent based on some general characteristic such as race, gender, or education level, and some more specific attributes like whether you've donated blood recently or whether you rent or buy your home in an attempt to try and better represent the true voter population. What's different about this year compared to the previous two campaigns in 2016 and 2020 is that Trump is in a statistical tie rather than heavily behind. For Trump and Republican strategists who are doubtful pollsters have finally figured out how to accurately represent Trump's electorate, they perceive a tie to forecast a guaranteed win.

### 5.2 Does Kamala Harris have a chance?

There are a lot of factors that suggest Kamala Harris shouldn't have had a shot at winning this race to begin with. President Biden dropped out of the race only 107 days before election day. This unprecedented move's two closest examples in history were Truman and Johnson, who both dropped out with over 200 days to go, and both saw their replacements lose in the general election (Poynter Institute 2024). In addition, ABC News' most recent polls found that 74% of likely voters believe this country is headed in a wrong direction (ABC News 2024b). This negative sentiment has grown for the current administration due to their handling of global wars, ongoing border issues, and inflation, drawing harsh criticism from both sides of the aisle. Harris and Trump are clearly aware of this political atmosphere, as Trump has attempted to tie Harris to everything Biden and his administration have done. At the same time, Harris has urged voters to turn the page on the Trump era of politics. Whoever wins that narrative battle will most likely be the next president of the United States.

So, although it is an uphill battle, there are reasons for Harris and her campaign to believe they have a chance in this election. For the Harris campaign, they hope pollsters have finally figured out Trump's silent voter and, in doing so, may have overlooked some of her support.

The largest area in which Harris believes she can gain on her margins is with female voters. While polls show Trump ahead in issues like the Economy and the Border, Harris' counter is her lead on Abortion and women's rights(NBC News 2024). Because of this advantage, the Harris campaign hopes that women who may have previously said on surveys or calls in front of their husbands that they were voting for Trump will actually vote for Harris on election day. Her campaign also hopes young voters who claim to have abandoned the democratic party over their handling of the war in Gaza will ultimately side with her when faced with the two choices of her or Trump. And if Latino voters who are angered over recent comments made about Puerto Rico at the Trump rally in Madison Square Garden will halt the gains Trump has been making in the Latino community since 2016. While it's unlikely all demographics perfectly go Harris' way, in a race as close as this one, any gain on the margins could be what seals it for her.

### **5.3 What do I think will happen?**

Both of these candidates are relying on sampling errors in the polls. Trump believes his voter delegation is untraceable by the polls, and ironically, so is Harris. However, are the tight margins we see throughout the polls a signal that Trump is going to run away with this election or have the polls finally figured out how to predict Trump's support accurately? I lean towards Harris squeaking out a victory by the thinnest of margins. When I look towards the Harris campaign, I see more potential. Women moving across the aisle due to concerns over abortion, a strong social media following boosting young voter support, or the Latino community turning against Trump halting the momentum he had going since 2016. One recent poll suggesting these trends may come to fruition is a new Iowa poll(Des Moines Register 2024) done by respect pollster J.Ann Selzer, who has predicted Iowa both correctly and accurately since 2008. In this poll of 808 Iowans, Selzer and Company have Harris leading by a 3-point margin, within the margin of error, but most other outlets project Trump to win by nearly 10 points as he has in the past two election cycles. Selzer points to a shift in the female and age demographics towards Harris as the reason for her projected victory. These are the types of gains the Harris campaign will have to make with multiple communities across America if she wants to become the next president of the United States, but according to this poll, those gains are there to be made.

### **5.4 Weaknesses and next steps**

Weaknesses and next steps should also be included.

## A Appendix

### #Appendx 1.A

One poll that was frequently sampled throughout our analysis was ABC News' poll(ABC News 2024a) completed by Langer Research Associates in partnership with Ipsos. Their most recent poll was created to predict the outcome of the general election. They sampled eligible voters across the United States randomly through addressed-based sampling. They sent invitations to 4,335 participants, 2,496 sent a response, and 47 were discarded due to not filling out over half the questions or completing the survey in the top 1% time, leaving a sample of 2,449 likely voters. Participantsants were sent an online surusing Ipsos Knowledge Panel vey to complete. Ipsos then weighs respondents based on race, ethnicity, sex, religion, education, region, household income, household size, marital status, home ownership, metropolitan area, as well as passed voting preference and preferred language. These weights measure the probability of portion-to-size sample selections, increasing participants' probability of selection if their sample weights are higher. Specifically, respondents between the ages of 18-29, black and Latino, are all oversampled to make up for lack of representation and handle non-response bias.

Langer's research settled on a 95% confidence interval to calculate their sampling error, but note that other sources of error can arise from questionnaire wording, order, and systematic noncoverage or selection bias. While an online survey is cost-effective, far-reaching, and convenient both in recording and receiving data, there are some negatives. The response rate is low, below 50%, and sample bias as those who respond to surveys are more likely to vote Democrat (the trap pollsters fell into in 2016 and 2020), and you can't observe the environment the respondents answer the survey in to ensure no outside bias. However, Langer's research disregarded the concerns for their low response rate by citing research papers, including this one written in 2000: "Consequences of Reducing Non-response in a National Telephone Survey" (Keeter, Miller, Kohut, Groves & Presser, POQ 64:125-48)(ABC News 2024a), which found similar results between response rates of 36%-61%.

### A.1 Posterior predictive check

In ?@fig-ppcheckandposteriorvsprior-1 we implement a posterior predictive check. This shows...

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

## References

- ABC News. 2024a. “ABC News Polling Methodology and Standards.” <https://abcnews.go.com/US/PollVault/abc-news-polling-methodology-standards/story?id=145373>.
- . 2024b. *Election Stays Close in Final Weekend Amid a Dispirited Electorate: POLL*. ABC News. <https://abcnews.go.com/Politics/election-stays-close-final-weekend-dispirited-electorate-poll/story?id=115278707>.
- Alexander, Rohan. 2023. *Telling Stories with Data*. Chapman; Hall/CRC. <https://tellingstorieswithdata.com/>.
- Des Moines Register. 2024. *Iowa Poll: Kamala Harris Leads Donald Trump in 2024 Presidential Race*. Des Moines Register. <https://www.desmoinesregister.com/story/news/politics/iowa-poll/2024/11/02/iowa-poll-kamala-harris-leads-donald-trump-2024-presidential-race/75354033007/>.
- Goodrich, Ben, Jonah Gabry, Imad Ali, and Sam Brilleman. 2022. “rstanarm: Bayesian applied regression modeling via Stan.” <https://mc-stan.org/rstanarm/>.
- Horst, Allison Marie, Alison Presmanes Hill, and Kristen B Gorman. 2020. *palmerpenguins: Palmer Archipelago (Antarctica) penguin data*. <https://doi.org/10.5281/zenodo.3960218>.
- NBC News. 2024. *Final NBC News Poll: Harris-Trump Race Neck and Neck, with Significant Gender Gap*. NBC News. <https://www.nbcnews.com/politics/2024-election/final-nbc-news-poll-harris-trump-race-neck-neck-significant-gender-gap-rcna178361>.
- Poynter Institute. 2024. *Has a Presidential Candidate Ever Dropped Out Before Election Day? Here’s What History Shows*. Poynter. <https://www.poynter.org/fact-checking/2024/has-presidential-candidate-dropped-out-before-history/>.
- R Core Team. 2023. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Toronto Shelter & Support Services. 2024. *Deaths of Shelter Residents*. <https://open.toronto.ca/dataset/deaths-of-shelter-residents/>.