My title*

Forecasting the 2024 U.S. Presidential Election using Poll of Polls Methodology

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

1 Introduction

The U.S. Presidential Election will take place on Tuesday November 5th. Vice President Kamala Harris and former President Donald Trump will vie to become the 47th President of the United States. Vice President Kamala Harris became the Democratic nominee after 82-year-old President Joe Biden made a historic and unprecedented decision to end his re-election campaign on July 21, 2024. She secured enough delegates to win the Democratic nomination on Vice President Kamala Harris and Former President Donald Trump … President Joe Biden made the unprecedented decision to end his re-election campaign on July 21, 2024 and immediately endorsed Vice President Kamala Harris. She became the presumptive Democratic presidential nominee the same day and secured enough delegates to win the nomination on July 28.

This study only considers polling data from after President Joe Biden ended his re-election campaign and Vice President Kamala Harris became the presumptive Democratic nominee for President. Polls conducted before July 21, 2024 were not considered because they include President Joe Biden, who is no longer running for President, as the Democratic nominee.

Estimand paragraph

Results paragraph

Why it matters paragraph

The remainder of this paper is structured as follows. Section 2 contains

*The code and data used to perform this presidential election forecast can be found at: https://github.com/taliafabs/USPresidentialPollingForecast2024.git.

2 Data

2.1 Overview

This presidential election forecast was performed using the statistical programming language R (R Core Team 2023) and Presidential general election polling data from FiveThirtyEight (Best et al. 2024). Data cutoff October 29, 2024. No resources or articles from after this date were used or considered in any way.

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.

2.3.1 National and swing state polling averages over time

This takes into account date and state.

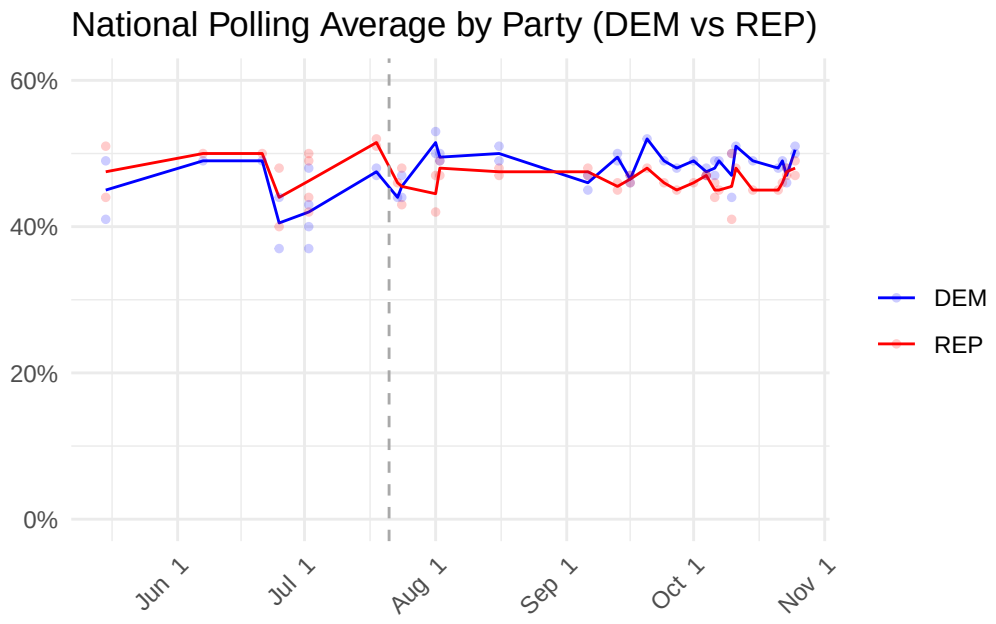


Figure 1: National Polling Averages since May 2024

Since President Biden ended his re-election campaign and Vice President Harris became the Democratic Presidential nominee, the polls have shown a dead heat between Vice President Harris and former President Trump.

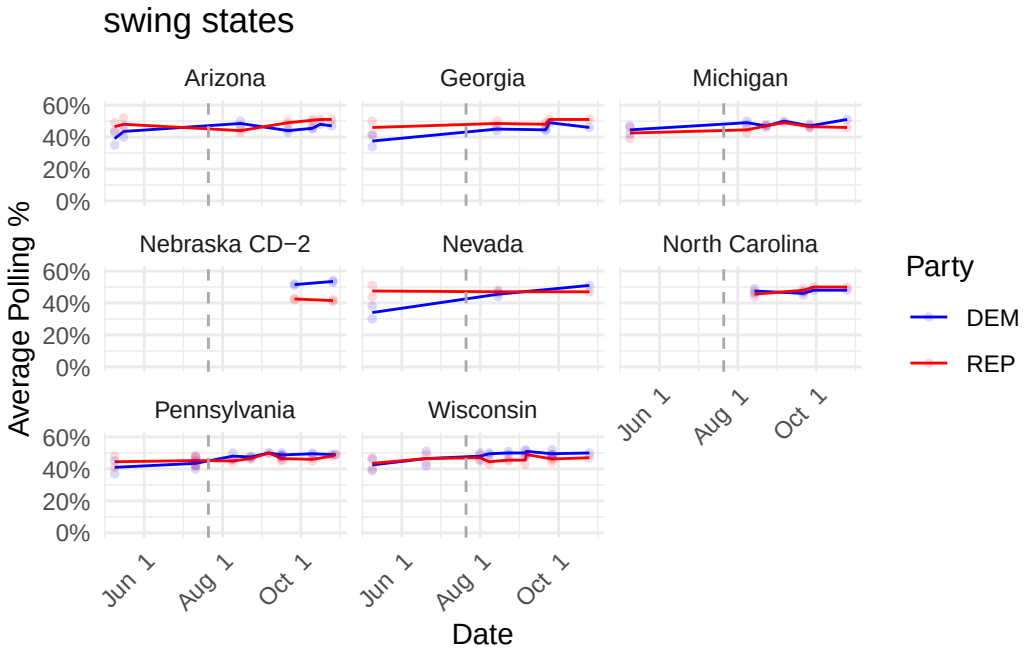


Figure 2: seven battleground states

2.3.2 Pollster

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.)

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.

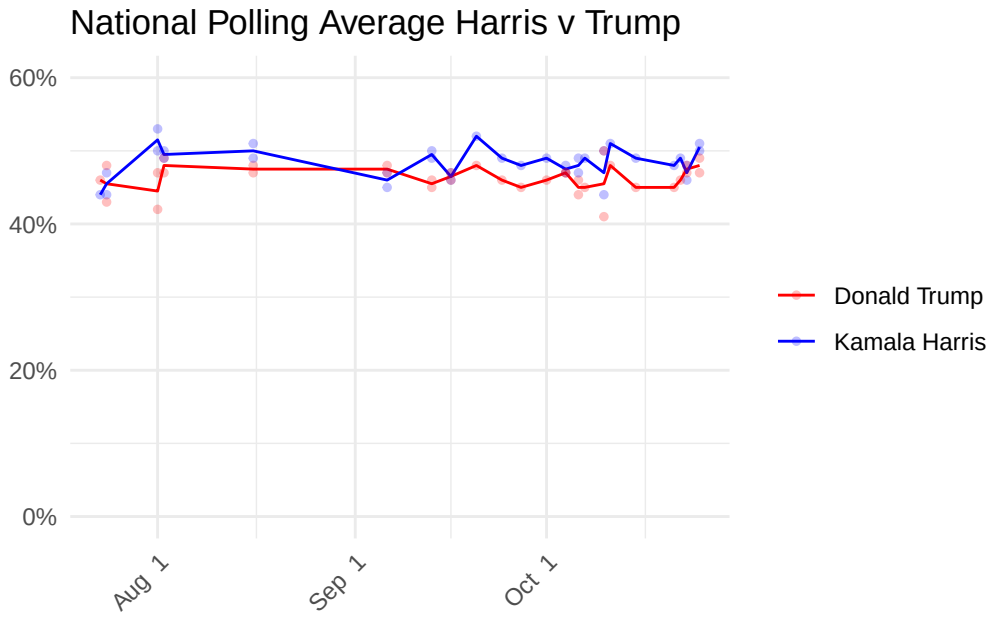


Figure 3: National Polling Averages since May 2024

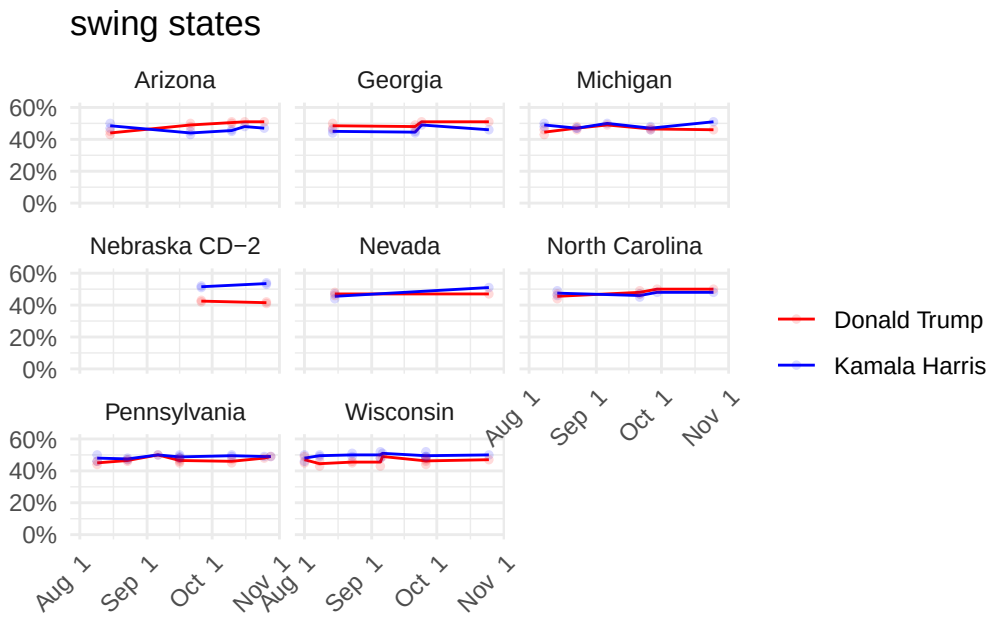


Figure 4: seven battleground states with harris

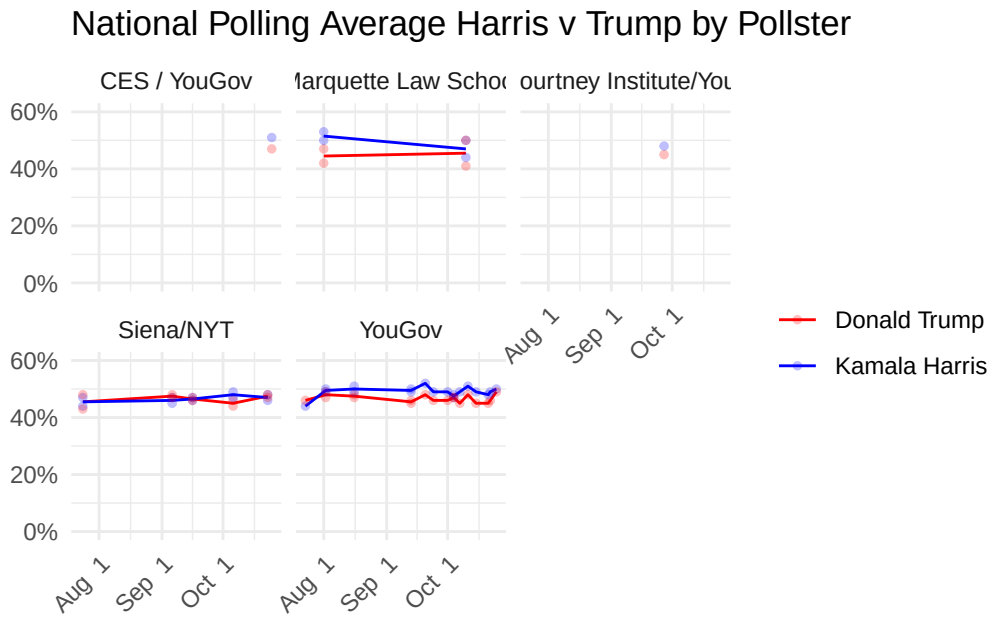


Figure 5: Pollsters caption

3 Model

The goal of our modelling strategy is twofold.

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

3.1 Model set-up

Define y_i as the number of seconds that the plane remained aloft. Then β_i is the wing width and γ_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 θ.

4 Results

Our results are summarized in Table 1.

4.1 Popular Vote Results

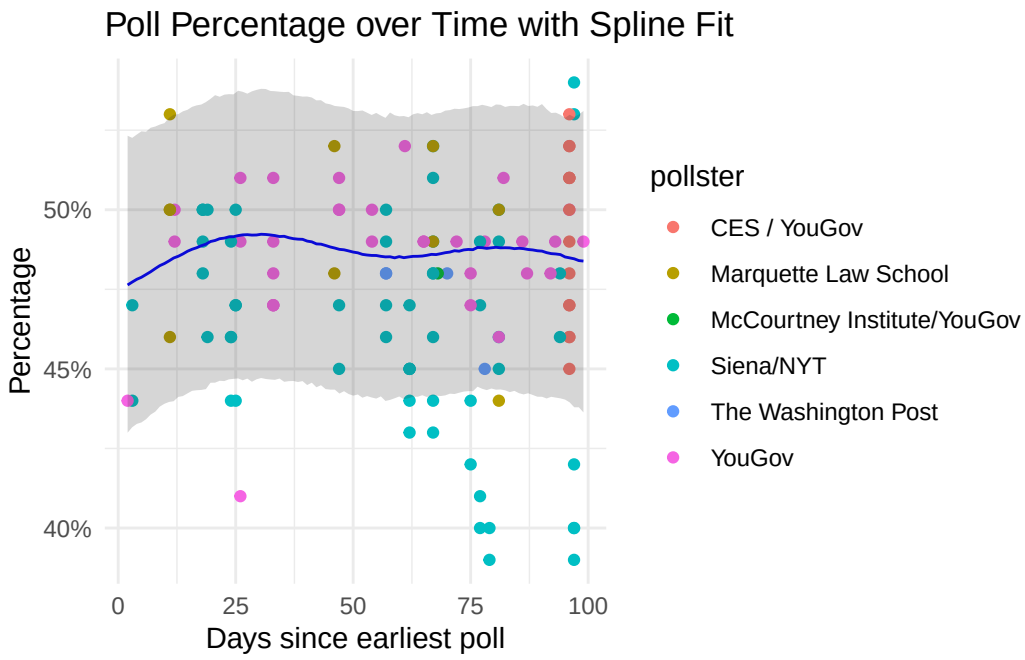
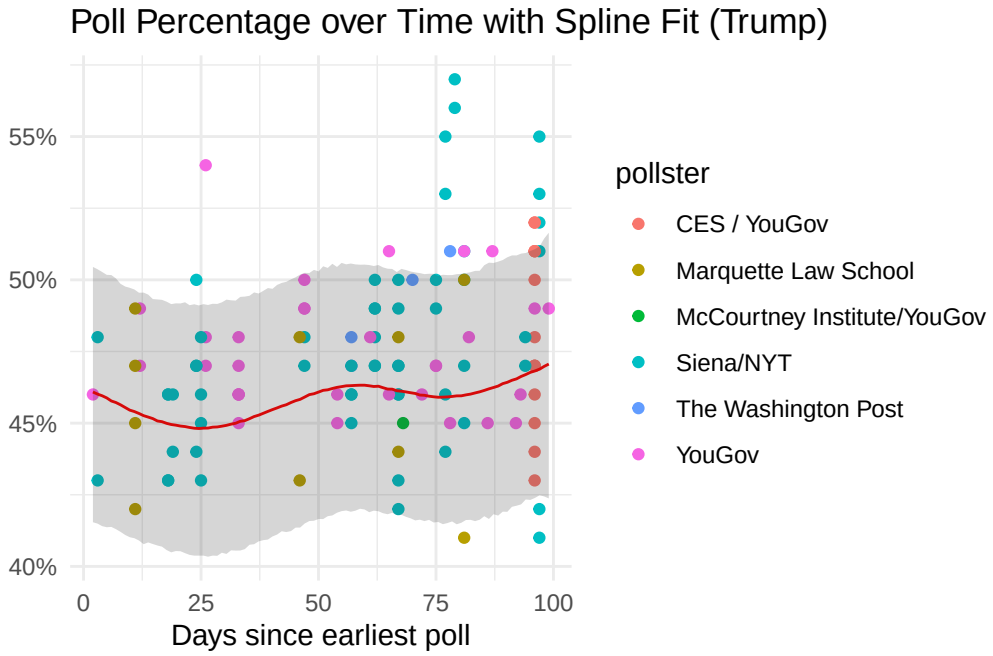
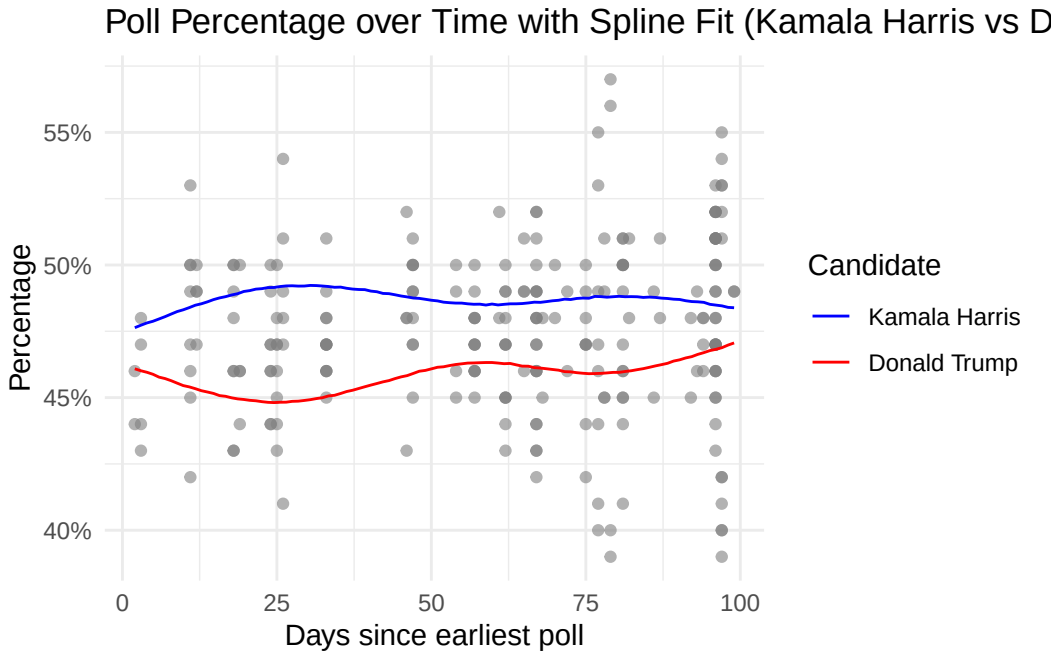


Table 1: Explanatory models of support for Harris and Trump based on …

	Harris	Trump
(Intercept)	47.48	48.69
	(1.19)	(1.24)
ns(end_date_num, df = 5)1	0.47	0.95
	(1.13)	(1.11)
ns(end_date_num, df = 5)2	1.23	−0.57
	(1.37)	(1.38)
ns(end_date_num, df = 5)3	0.83	0.54
	(1.53)	(1.45)
ns(end_date_num, df = 5)4	2.76	−0.98
	(2.15)	(2.18)
ns(end_date_num, df = 5)5	−0.80	2.42
	(1.08)	(1.05)
stateFlorida	−4.14	4.45
	(1.14)	(1.18)
stateGeorgia	−0.81	0.58
	(0.94)	(0.91)
stateMichigan	1.56	−2.20
	(0.87)	(0.87)
stateMinnesota	4.07	−5.70
	(1.82)	(1.73)
stateMissouri	−6.06	4.75
	(1.82)	(1.86)
stateMontana	−5.92	7.66
	(1.42)	(1.36)
stateNational	1.65	−2.81
	(0.72)	(0.70)
stateNebraska	−5.59	4.36
	(1.48)	(1.47)
stateNebraska CD-2	6.76	−6.79
	(1.14)	(1.08)
stateNevada	0.41	−0.97
	(1.23)	(1.17)
stateNew Hampshire	3.21	−3.88
	(1.74)	(1.79)
stateNorth Carolina	0.73	−0.71
	(0.94)	(0.93)
stateOhio	−2.27	1.40
	(1.09)	(1.07)
statePennsylvania	2.08	−2.22


Poll Percentage over Time with Spline Fit (Trump)
55%
50%
45%
40%
0
25
50
75
100
Days since earliest poll
pollster
CES / YouGov
Marquette Law School
McCourtney Institute/YouGov
Siena/NYT
The Washington Post
YouGov


Poll Percentage over Time with Spline Fit (Kamala Harris vs D
55%
50%
45%
40%
Percentage
0
25
50
75
100
Days since earliest poll
Candidate
Kamala Harris
Donald Trump

4.2 State-Level Results for the Seven Battleground States

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 Idealized methodology

A.1 Idealized survey

B Pollster methodology overview and evaluation

C Additional data details

C.1 Polling averages from before President Joe Biden ended his re-election campaign

D Model details

D.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…

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

D.2 Diagnostics

?@fig-stanareyouokay-1 is a trace plot. It shows… This suggests…

?@fig-stanareyouokay-2 is a Rhat plot. It shows… This suggests…

Checking the convergence of the MCMC algo-
rithm

References

Best, Ryan, Aaron Bycoffe, Holly Fuong, Christopher Groskopf, Ritchie King, Ella Koeze, Dhrumil Mehta, et al. 2024. *538*. https://projects.fivethirtyeight.com/polls/national/.

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/.