Predictive Election Models

Data Analysis for Journalism and Political Communication
(Spring 2025)

Prof. Bell

Dart-Throwing Chimpanzees

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- By design, the **prediction interval** is wider than the confidence interval (e.g., MOE)

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  - **Supervised learning**: The researcher provides the machine with a target (e.g., an election outcome) and the machine determines the features of the test data that best predict the target
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- Because computation replaces some researcher decisions, many machine learning/AI models are considered "black boxes" where it is difficult to decipher why the machine makes the predictions that it does (called **explainability**)

Expert Political Judgment

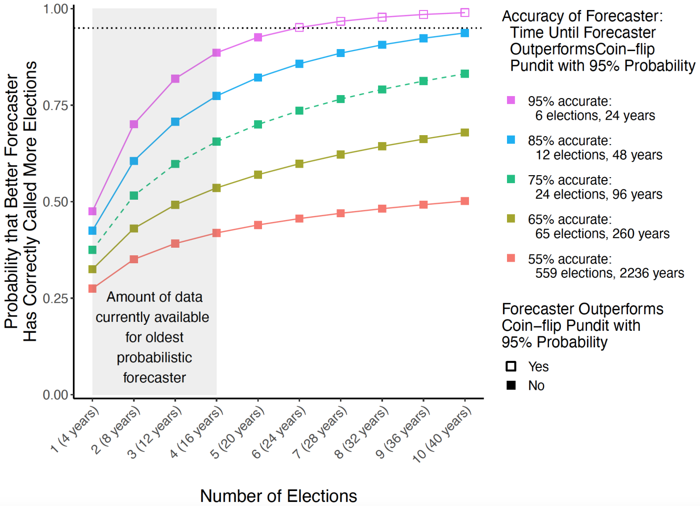
vs.

Wisdom of the Crowds

Wisdom of the Crowds

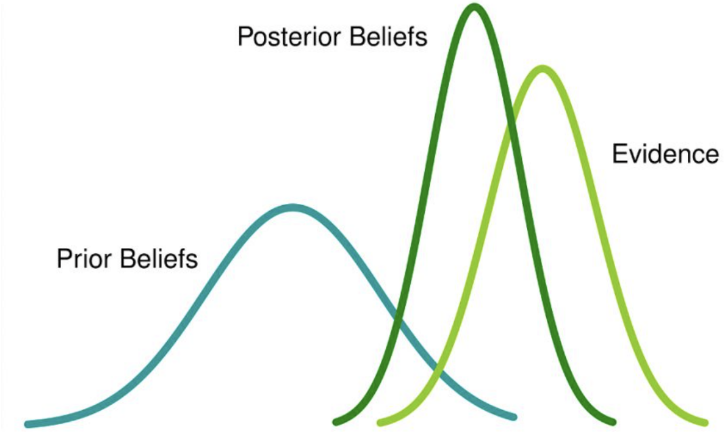
Polling aggregation	Clinton	Trump	Clinton	Trump	Clinton	Trump
	Probabilities		Electoral college		Vote share	
FiveThirtyEight	70.3	29.6	299	238	48.6	45.1
The Upshot	84.0	16.0	322	216		
RCP average of polls			301	237	47.2	44.3
The Daily Kos	88.0	12.0	313	225		
Princeton EC	99.0	1.0	312	226	51.3	48.8
HuffPost	98.1	1.6	323	215		
PollyVote			323	215	52.6	47.4
Mean	**87.9**	**12.0**	**313.3**	**224.6**	**49.0**	**46.1**

Wisdom of the Crowds



Source: Grimmer, Justin, Dean Knox, and Sean Westwood. 2024. “Assessing the Reliability of Probabilistic US Presidential Election Forecasts May Take Decades.” OSF Preprints. August 26. doi:10.31219/osf.io/6g5zq.

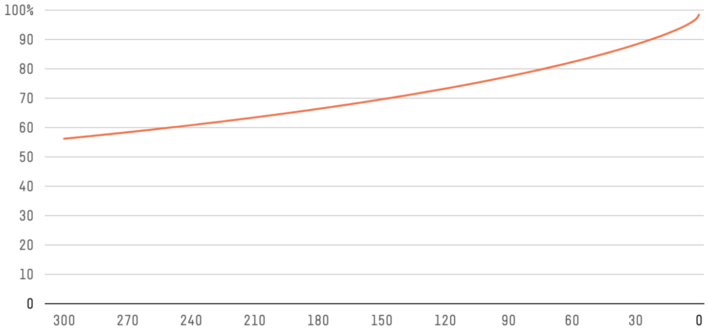
How Prediction Models Work



How Prediction Models Work

We put more weight on the polls as Election Day approaches

Estimated* share of the overall 538 presidential forecast that is based on polls (as opposed to non-polling historical "fundamentals"), by day before the election



*As of Aug. 23, this estimate uses a standard deviation of 9 percentage points in 538's fundamentals model and a daily standard deviation of 0.35 points in polls, plus overall uncertainty of 1 point about the polling average. Real values will depend on how many polls we have and can differ from this estimate by a few points.

538

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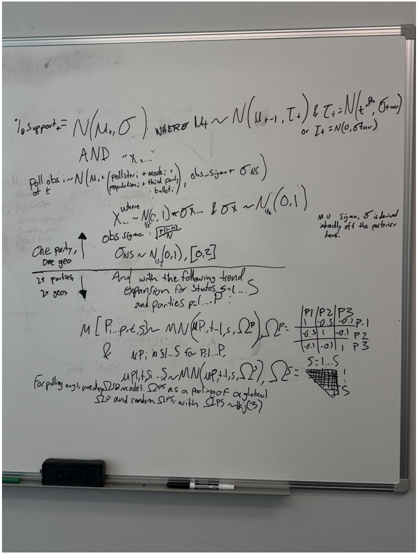

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- How to communicate probabilities

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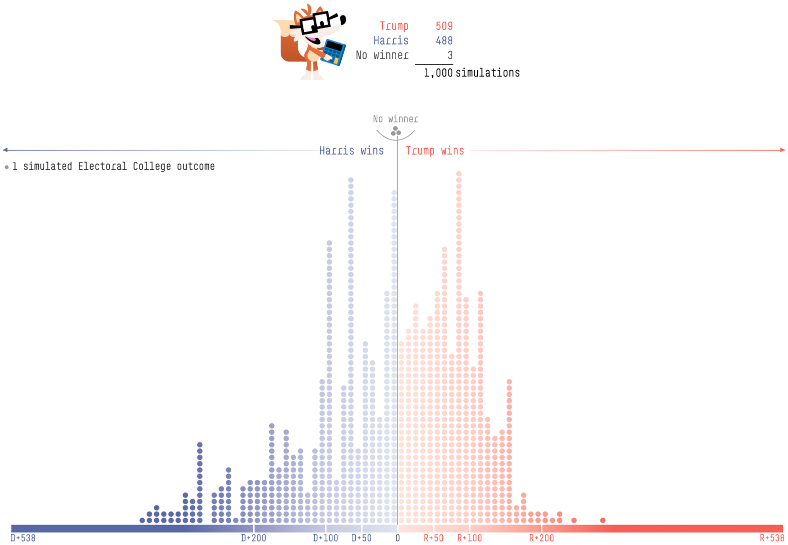

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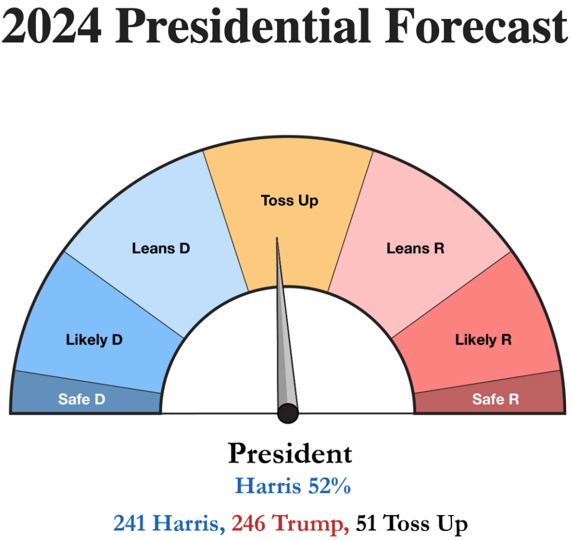

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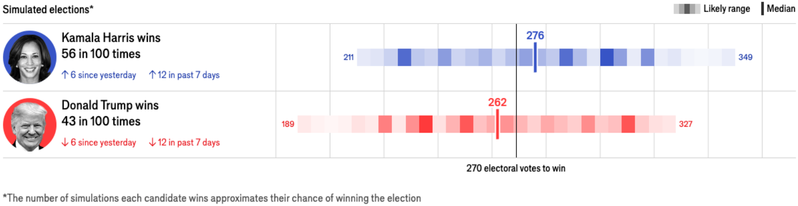

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