

The background of the slide features a 3D rendering of a donkey and an elephant, the symbols of the Democratic and Republican parties respectively. They are positioned on a red carpet. The donkey is on the left, and the elephant is on the right. Both are decorated with the stars and stripes of the American flag. The donkey's body is blue with white stars, and its legs are red and white. The elephant's body is red with white stars, and its legs are blue and white. The background is a dark blue field with white stars.

CS-84 FINAL PROJECT PRESENTATION 2020 ELECTION PREDICTION

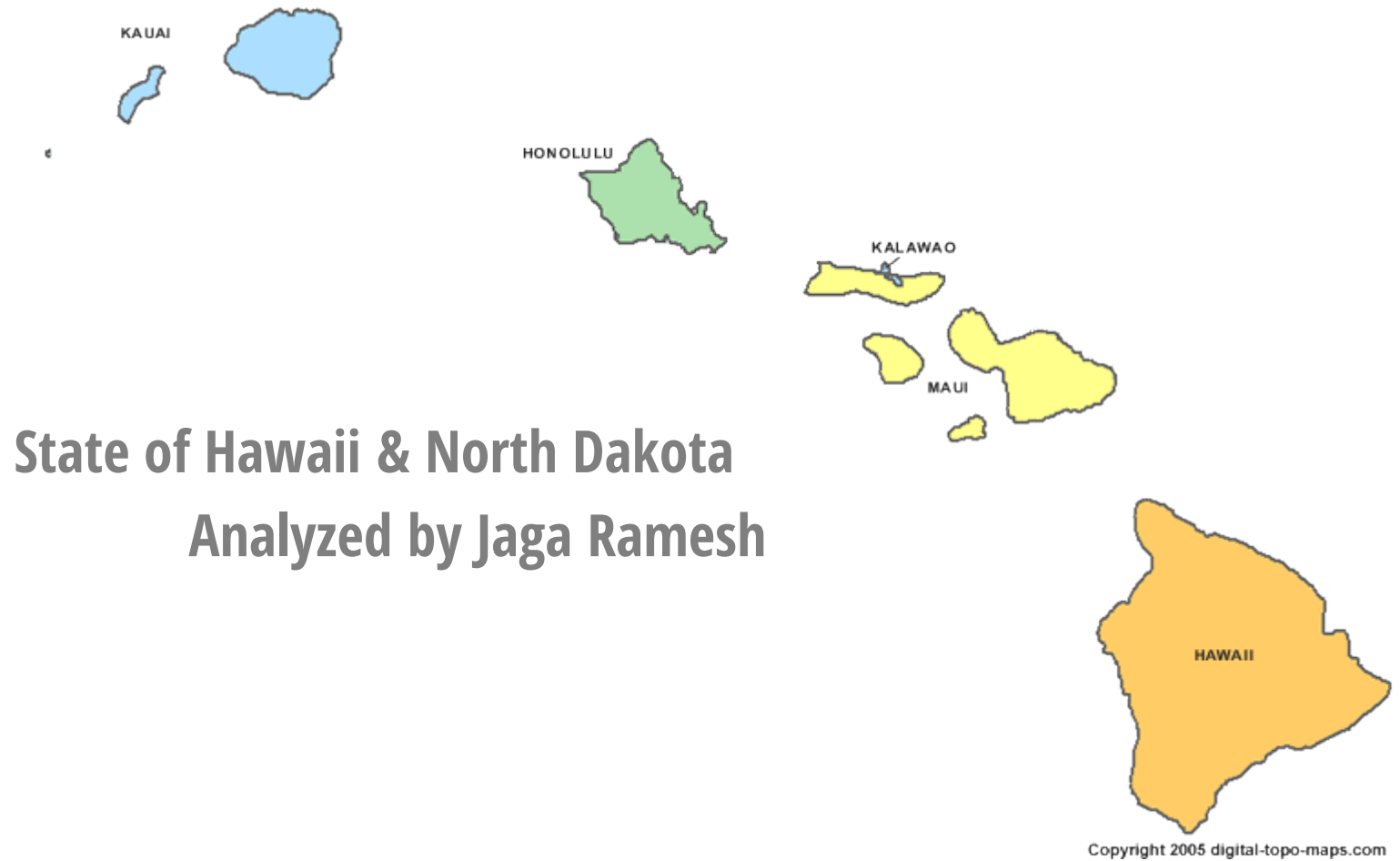
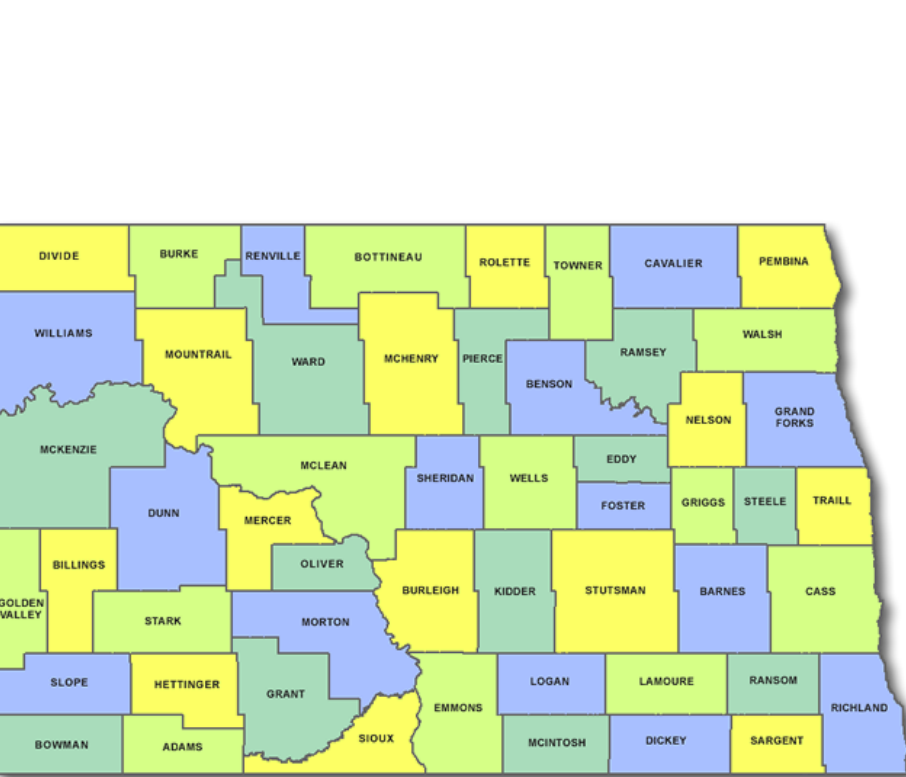
States : Hawaii, North Dakota

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HARVARD
Extension School

STATES : HAWAII & NORTH DAKOTA

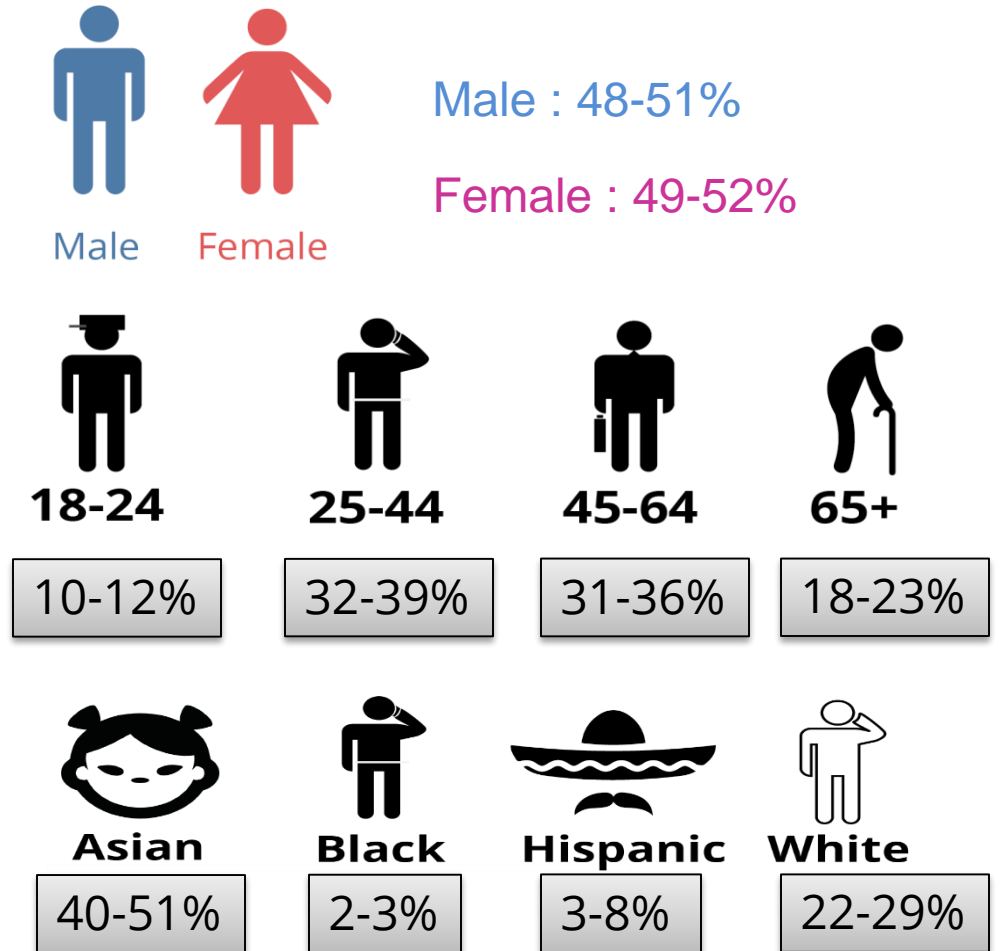


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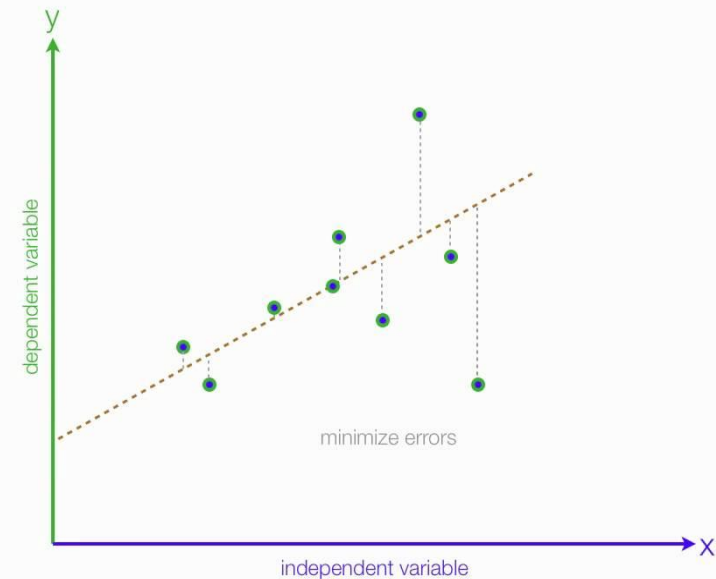
HAWAII : OVERVIEW

- › Electoral votes : 4
- › Culturally diverse with Asian (~40%), Multi race (~30%), White (~30%)
- › Counties : 4
- › Main source of income : Tourism
- › Lowest voter turnout in US : 39% of total Population



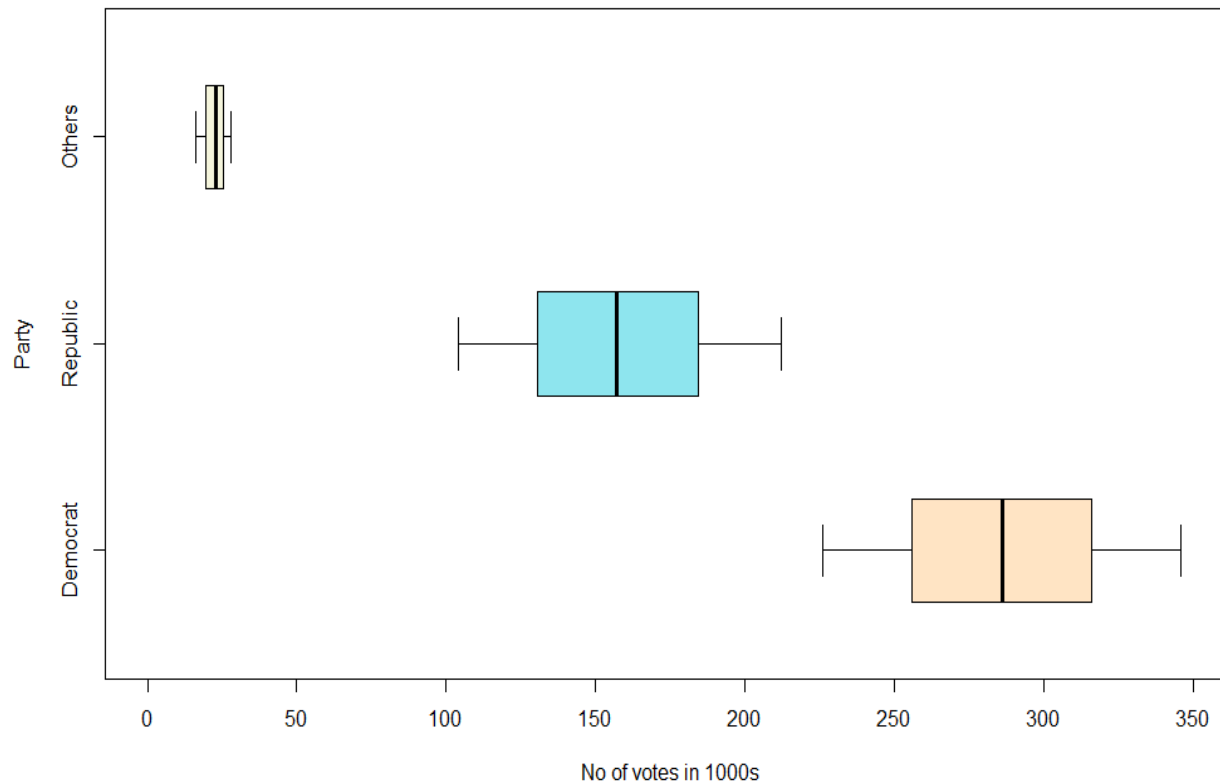
HAWAII : METHOD

- › Hawaii favored Democrats in elections 2000 to 2016
- › Voter turnout to determine Democrat Vs Republic votes
- › Linear Regression Model
- › R Programming
- › Box plot to display the range of Democrat / Republic / Other party votes with 95% confidence interval



HAWAII : FINDINGS

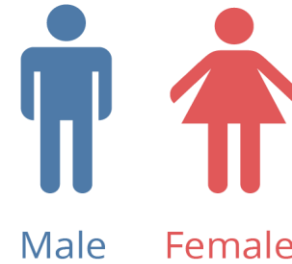
2020 Hawaii Voter prediction with 95% confidence



- Statistical analysis : Republican Party loses in Hawaii in 2020
- Democrat: 285,936 votes
(95% conf int : 226,287 and 345,586)
- Republic: 156,643 votes
(95% conf int : 103,857 and 211,574)
- Others : 22,956 votes
(95% conf int : 16,092 and 27,674)

NORTH DAKOTA : OVERVIEW

- › Electoral votes : 3
- › White dominant population (~89%)
- › Counties : 53
- › Main industries: Agriculture, Oil
- › Voter turnout : 61 – 65% of voting population



Male

Female

Male : 49-50%

Female : 50-51%



18-24

13-17%



25-44

31-39%



45-64

30-37%



65+

16-19%



Asian

0.5-1%



Black

0.5-1%



Hispanic

1-3%



White

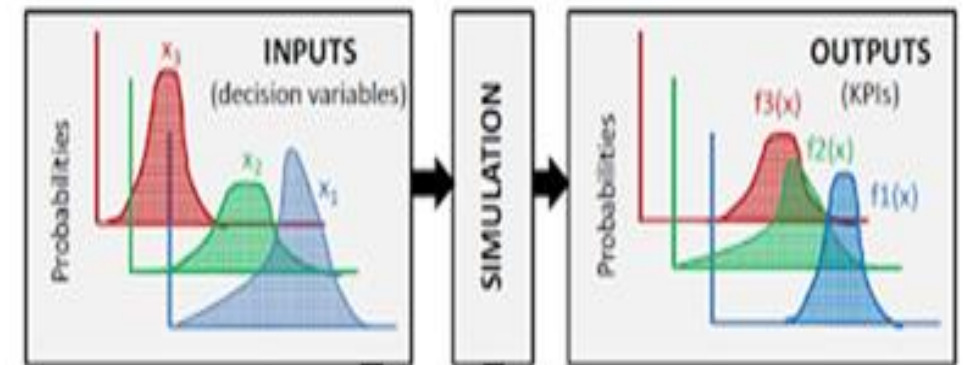
89-95%

NORTH DAKOTA : METHOD

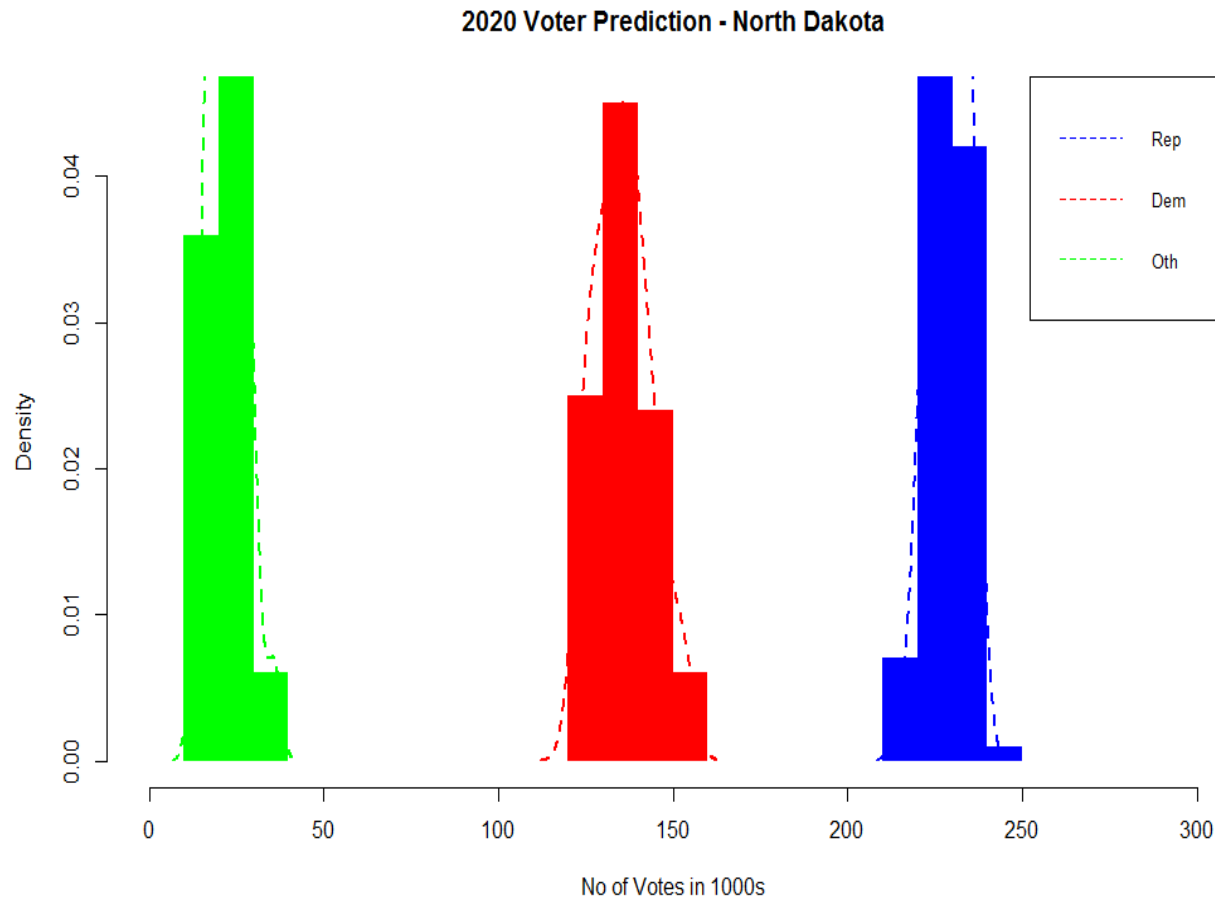
- › North Dakota favored Republicans in elections 2000 to 2016
- › Historical Voter turnout %, Democrat vote%, Republic vote % to statistically predict 2020 votes
- › Monte Carlo Analysis
- › R Programming
- › Histogram to display the range of Democrat / Republic / Other party votes



Monte Carlo Analysis



NORTH DAKOTA : FINDINGS



- › **Statistical Finding : Republican Party wins in North Dakota in 2020**
- › **Republic: 227,200 votes**
(Range: 206,000 and 240,400)
- › **Democrat: 135,900 votes**
(Range: 110,500 and 157,400)
- › **Others : 22,560 votes**
(Range: 11,920 and 34,120)

A 3D rendered image featuring a blue donkey and a red elephant, both decorated with white stars, set against a background of the American flag. The donkey is on the left, and the elephant is on the right. The text "THANK YOU!" is centered in the middle of the image.

THANK YOU!

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