Group 6-Predicting 2020 Presidential Elections

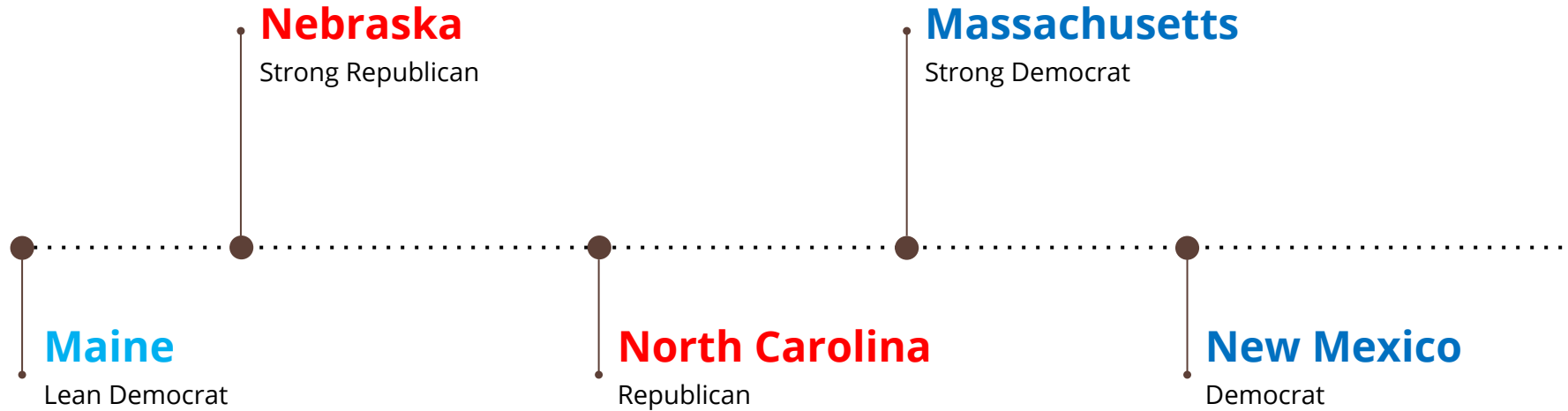Engy Fouda   Ashwini Katekar   Valérie Lavigne   Rajanikanth Vemulapalli   Ailing Wang
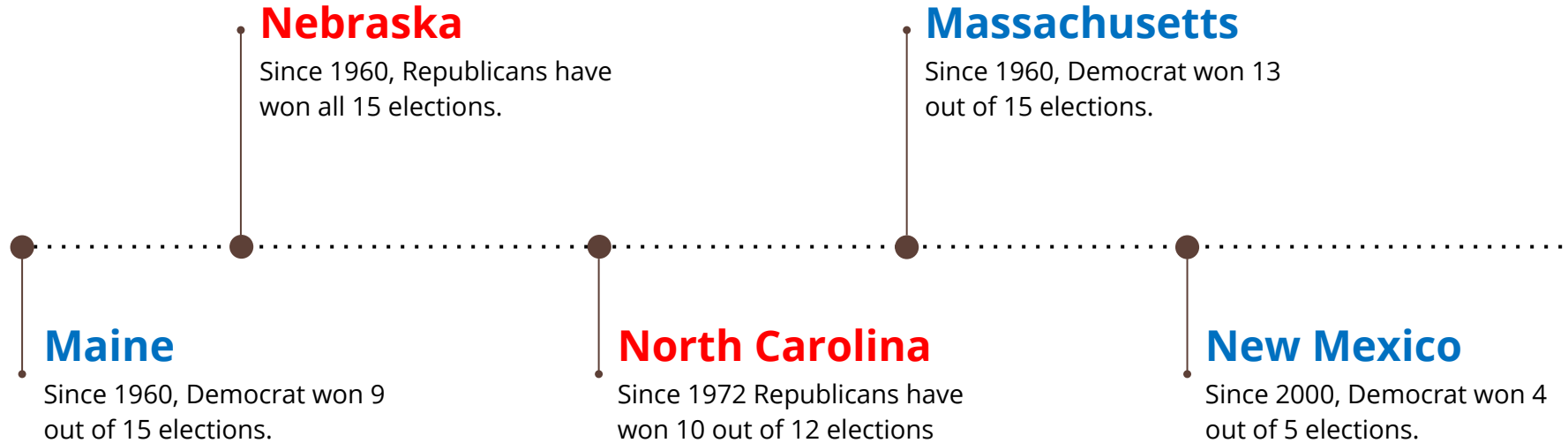
CSCI E-84 A Practical Approach to Data Science
Harvard Extension School

Abstract

Nebraska
Strong Republican

Massachusetts
Strong Democrat

Maine
Lean Democrat

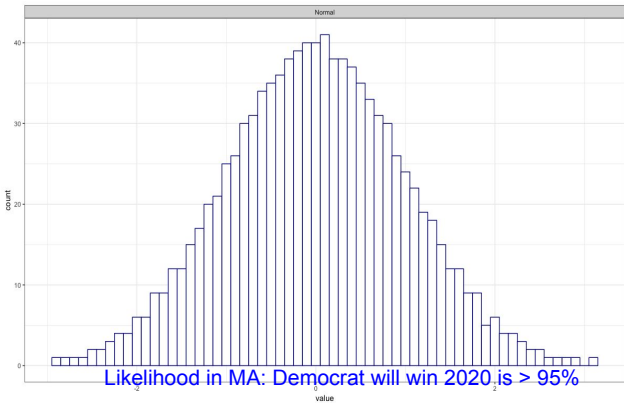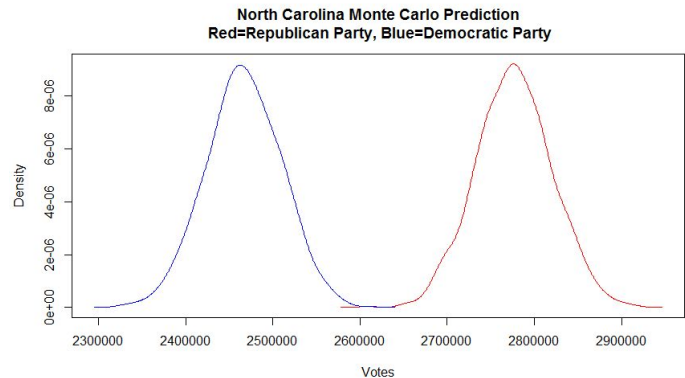**North Carolina**
Republican

New Mexico
Democrat

The group used R and SAS for the statistical analysis and the predicting model

Historic Data

Nebraska
Since 1960, Republicans have won all 15 elections.

Massachusetts
Since 1960, Democrat won 13 out of 15 elections.

Maine
Since 1960, Democrat won 9 out of 15 elections.

North Carolina
Since 1972 Republicans have won 10 out of 12 elections

New Mexico
Since 2000, Democrat won 4 out of 5 elections.

Models

North Carolina Monte Carlo Prediction
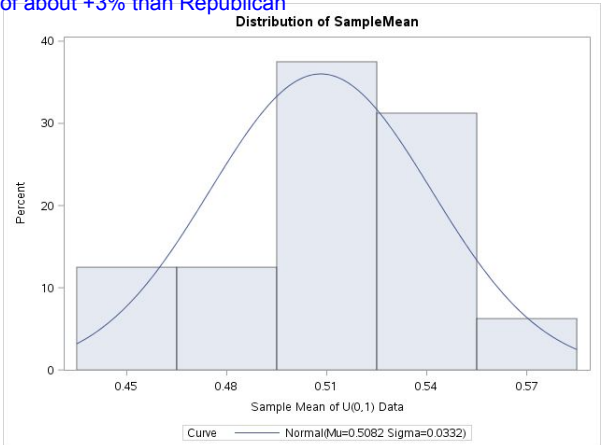Red=Republican Party, Blue=Democratic Party

Likelihood in MA: Democrat will win 2020 is > 95%

Likelihood in ME: Democrat will win 2020 by a minor difference of about +3% than Republican

Distribution of SampleMean

Republicans will win in Nebraska

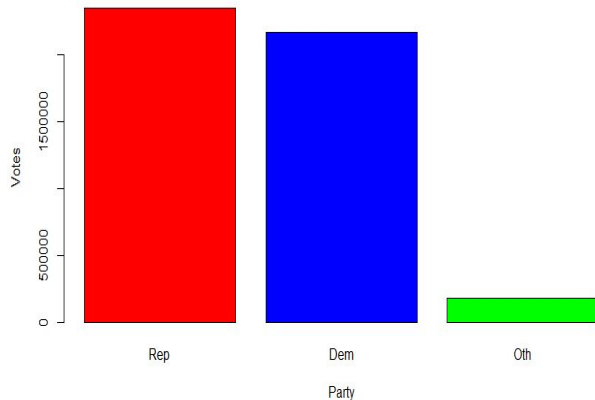Histogram margin votes for Democratic in New Mexico
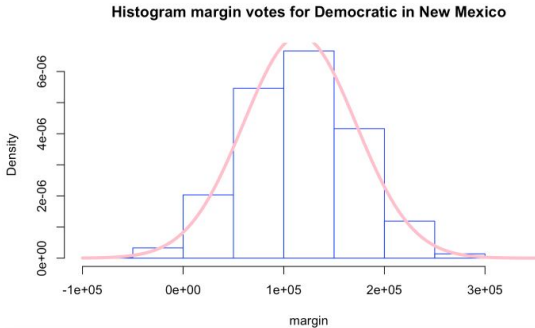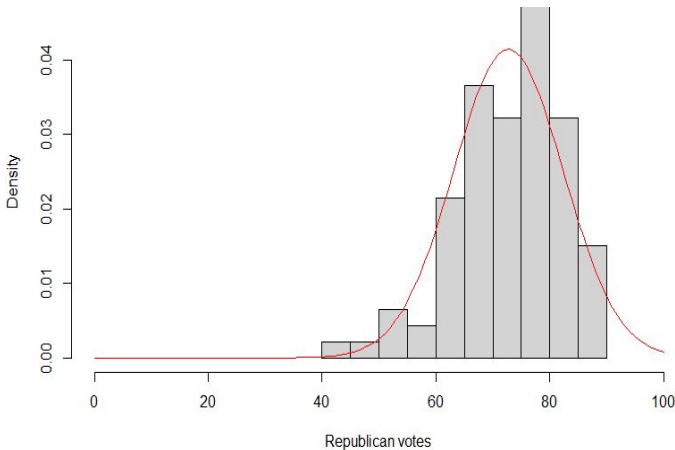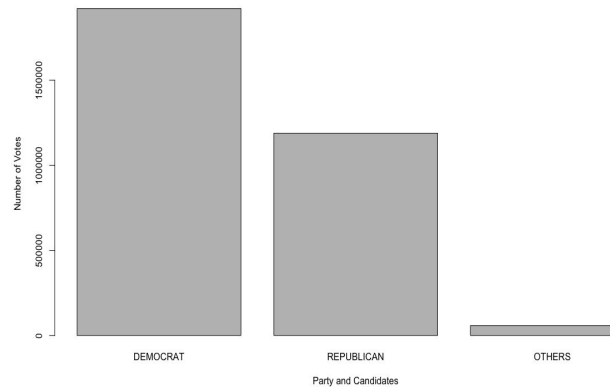
Statistical Review
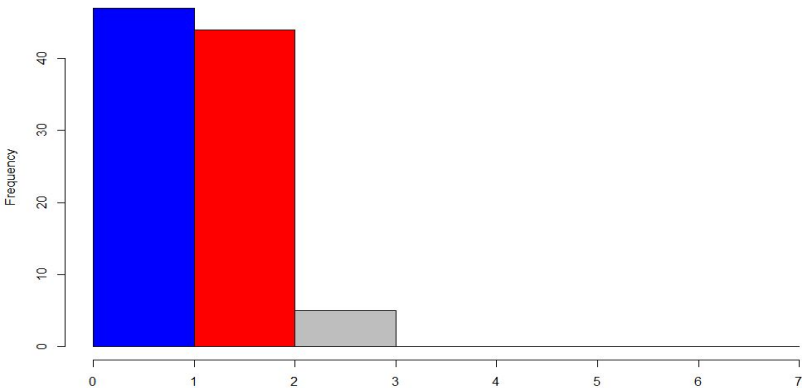

2016 Nebraska Presidential Results
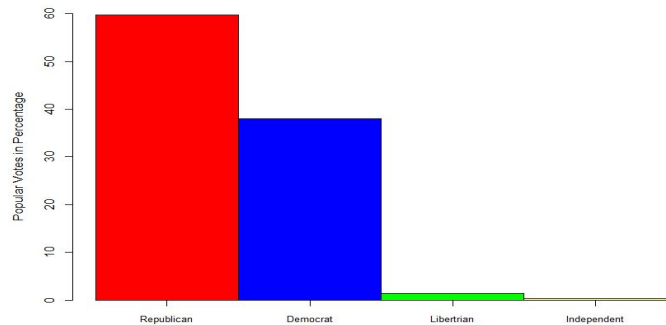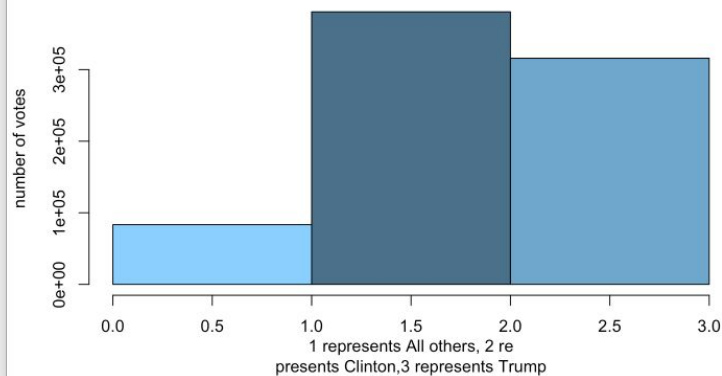
North Carolina 2016

Massachusetts - Histogram for Party and Candidates

Histogram of Candidates and their winning percentages in 2016

Total Votes in NM for Candidates

Other Statistics tests done by

Group 6

Histograms
Box Plots
Proportion Test
T-Test
Decision Tree
Chi-Square Test
Scatter plot

Conclusion, we predict

Democrat

Maine: 3 of 4 electoral votes by 50.8%.

Massachusetts: 11 electoral votes by 27%

New Mexico: 5 electoral votes by 97.86%

Electoral votes

19/40

Republican

Nebraska: 5 electoral votes by 97.7%.

North Carolina: 15 electoral votes by 5.8 %.

Electoral votes

21/40

Thank You!

GROUP 6