SDS homework 1 word doc
Zhou Fan

-Question1:

Cancelled	Carried	Defeated	NR
82	6761	1508	19

Proportion of different voting redults for each government type (purple-carried)

Government Types
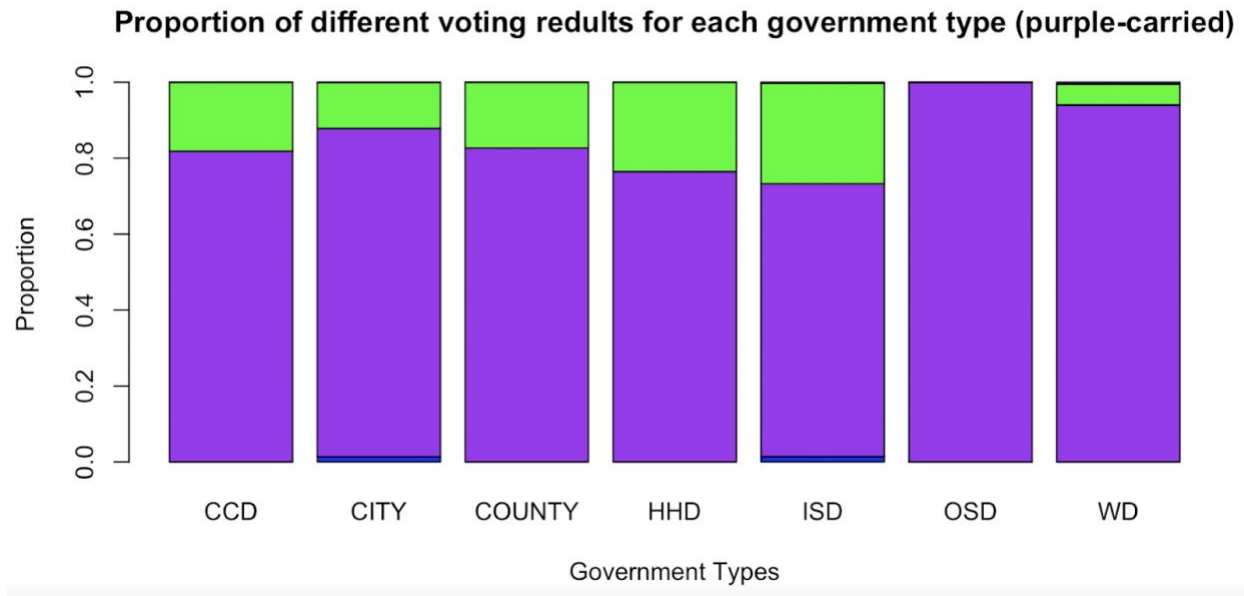
	CCD	CITY	COUNTY	HHD	ISD
Cancelled	0.0000000000	0.0134976526	0.0000000000	0.0000000000	0.0138856201
Carried	0.8181818182	0.8650234742	0.8266129032	0.7647058824	0.7187573547
Defeated	0.1818181818	0.1208920188	0.1733870968	0.2352941176	0.2652388797
NR	0.0000000000	0.0005868545	0.0000000000	0.0000000000	0.0021181454

|	OSD	WD
Cancelled	0.0000000000	0.0000000000
Carried	1.0000000000	0.9403202329
Defeated	0.0000000000	0.0553129549
NR	0.0000000000	0.0043668122

6761 of these bonds were approved and 1508 were defeated. Approved rates for each government type are(rounded to 2 decimal places): 0.82 for CCD; 0.87 for CITY; 0.83 for COUNTY; 0.76 for HHD; 0.72 for ISD; 1.00 for OSD; 0.94 for WD. Those approved rates across government types have a standard deviation of 0.09738592, which is statistically significant. Therefore, there is a clear difference in the rates of approved bonds across different government types

-Question 2:

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          Gov_Name Gov_Type County Election_Date Amount Purpose
7400 Harris County   COUNTY Harris        11/8/22  9e+08   Other
     Purpose_Detail Prop_Num Votes_For Votes_Against  Result
7400 Road Utilities        2    711352        319062 Carried
> highest$Election_Date   # when
[1] "11/8/22"
> highest$County          # where
[1] "Harris"
> highest$Purpose         # purpose type
[1] "Other"
> highest$Purpose_Detail  # purpose detail
[1] "Road Utilities"
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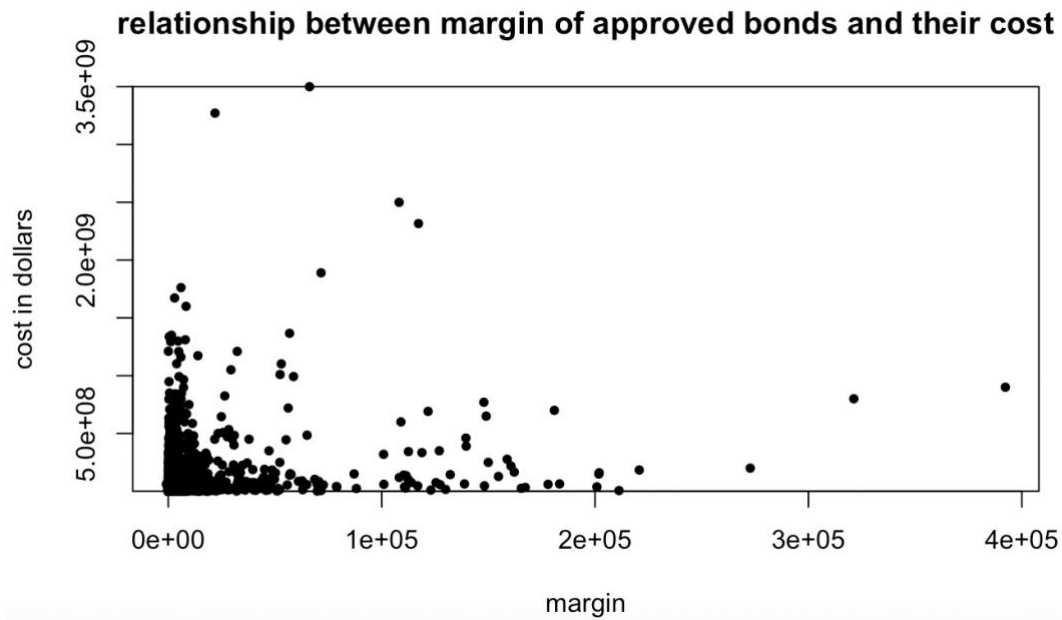
The highest voter turnout occurred in Harris on 11/8/22. It was for 'other' purpose – road utilities.

-Question 3:

distribution of percentage for the bond measure of the bonds subset
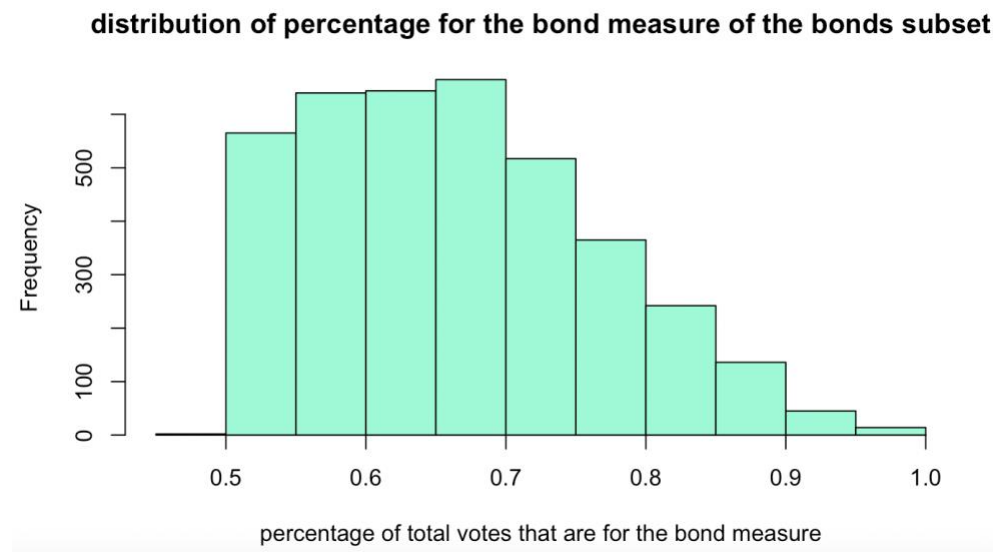
Description: The distribution of the percentage of total votes that were for the bond measure has a mean of 0.6641275 and is skewed right. There is no gap or obvious outliers. The percentage has a standard deviation of 0.1027677.

-Question 4:

relationship between margin of approved bonds and their cost

(y-axis: cost in dollars; x-axis: margin)

Yes, the margin a bond was approved by is positively related to its cost. The correlation coefficient between a bond's margin and its cost is 0.2515292, which is positive. Therefore, there is a weak, positive correlation between the margin of a bond that was approved and its cost.