

Math Models - Alumni Analysis

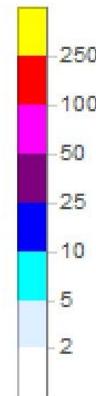
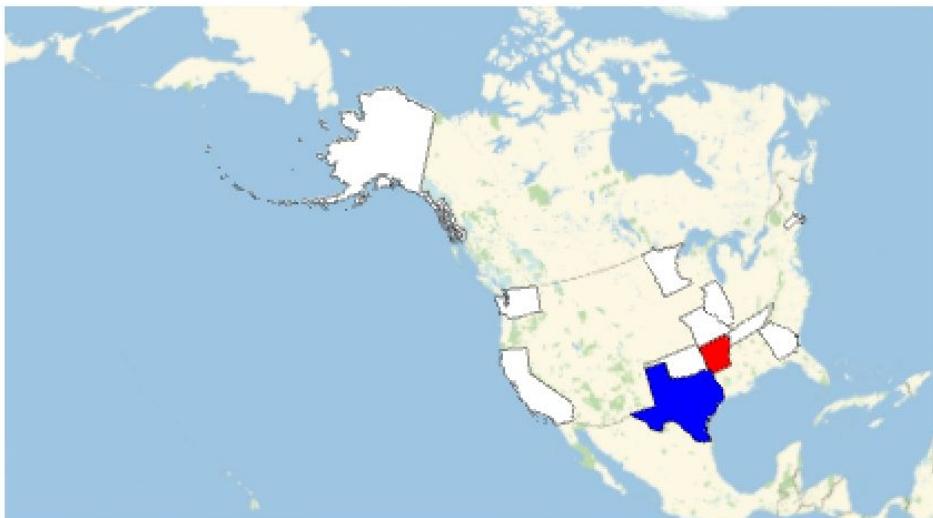
Gray, Shane, Kate, Callahan

Background

Background: Project Focus

- Had very loose ideas initially
- Wanted to do something related to events
- Eventually narrowed it down to
 - Looking at trends of alumni movement
 - Looking at what age group donates the most
 - Looking at where events are currently held

Where we have events

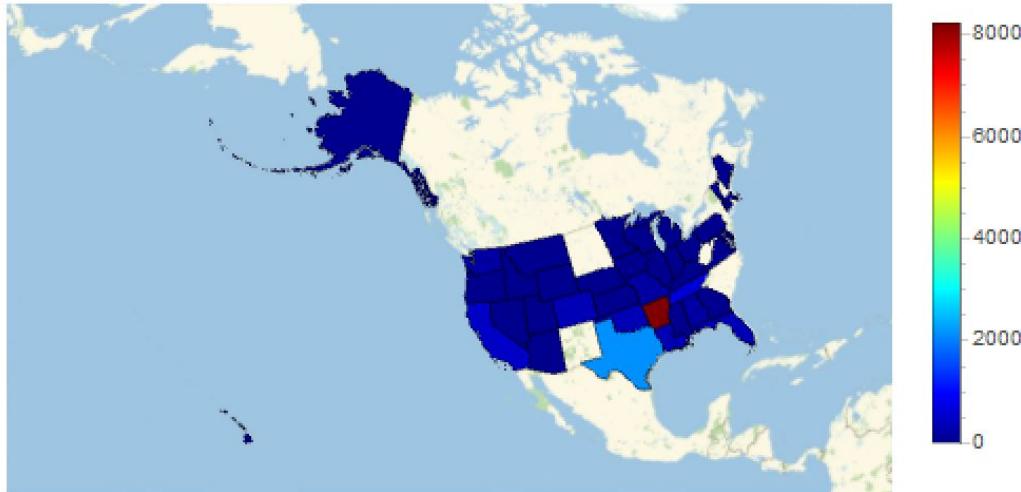


State	Number of Events
AR	256
TX	27
TN	15
DC	6
MO	4
NY	3
GA	2
CA	2
AK	1
IL	1
MA	1
OK	1
WA	1
MN	1

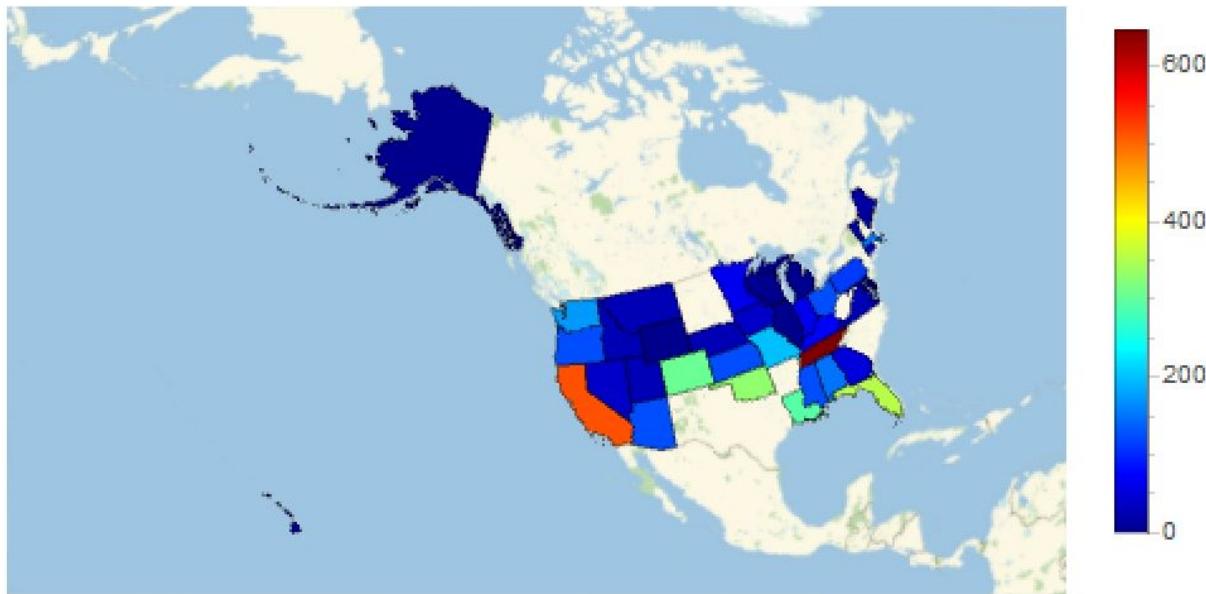
Plotting Each Zip Code



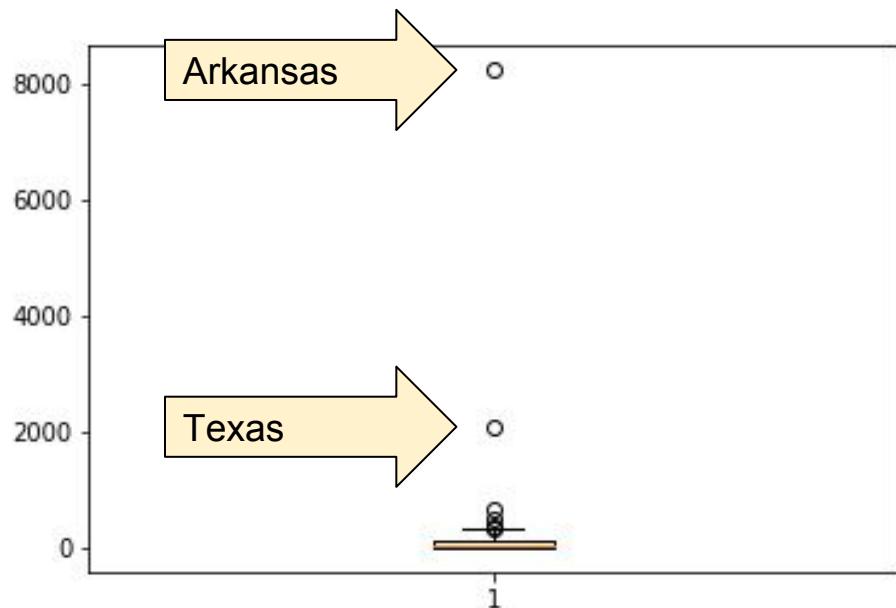
Plotting by State



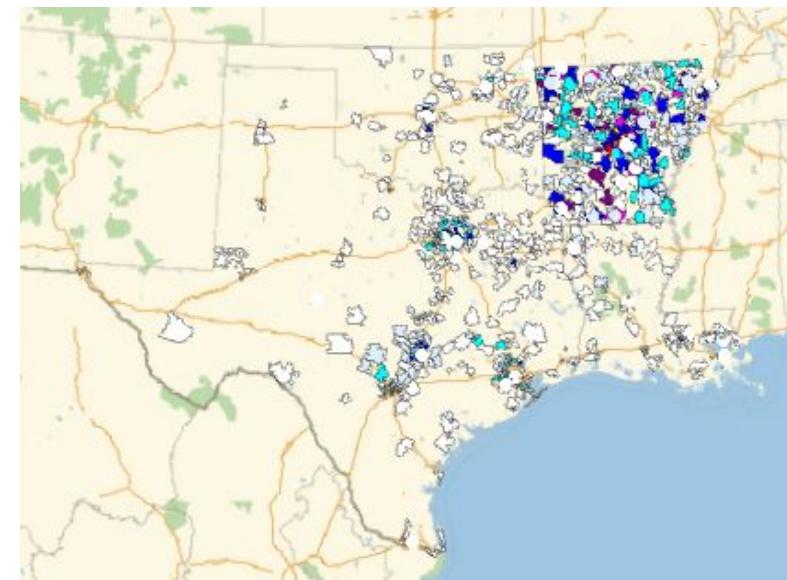
States by Population Excluding AR & TX



State Populations



Alumni Concentration

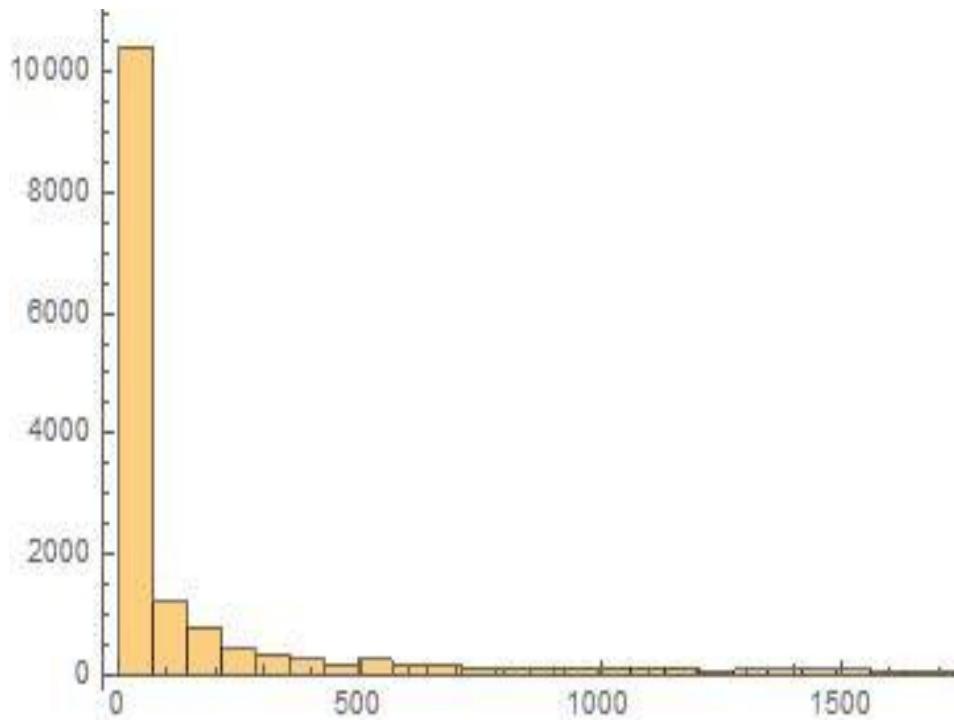


Donations

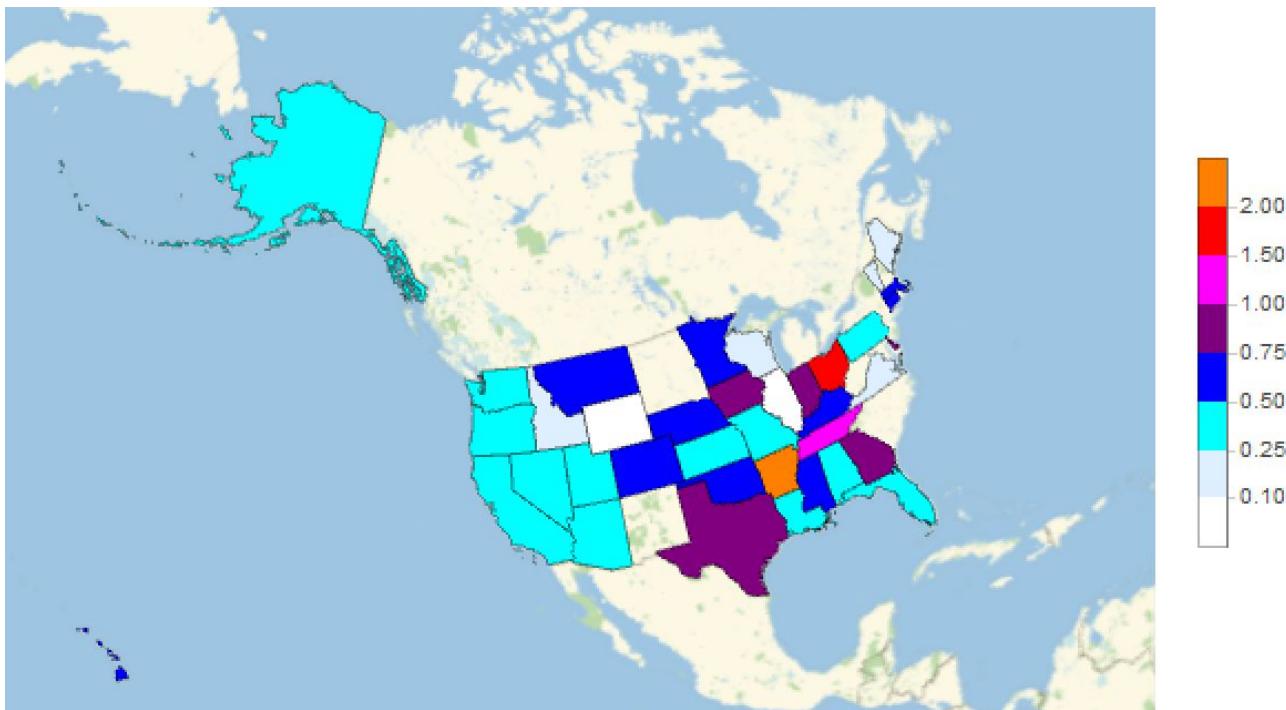
Histogram of all donations in dataset.

Large donations make up a very small percentage of total donations.

The vast majority of people do not donate to the college.



Average Events Attended Per Alum



Alumni Donations and Events Attended by State

Total Alumni Donations

8000000

7000000

6000000

5000000

4000000

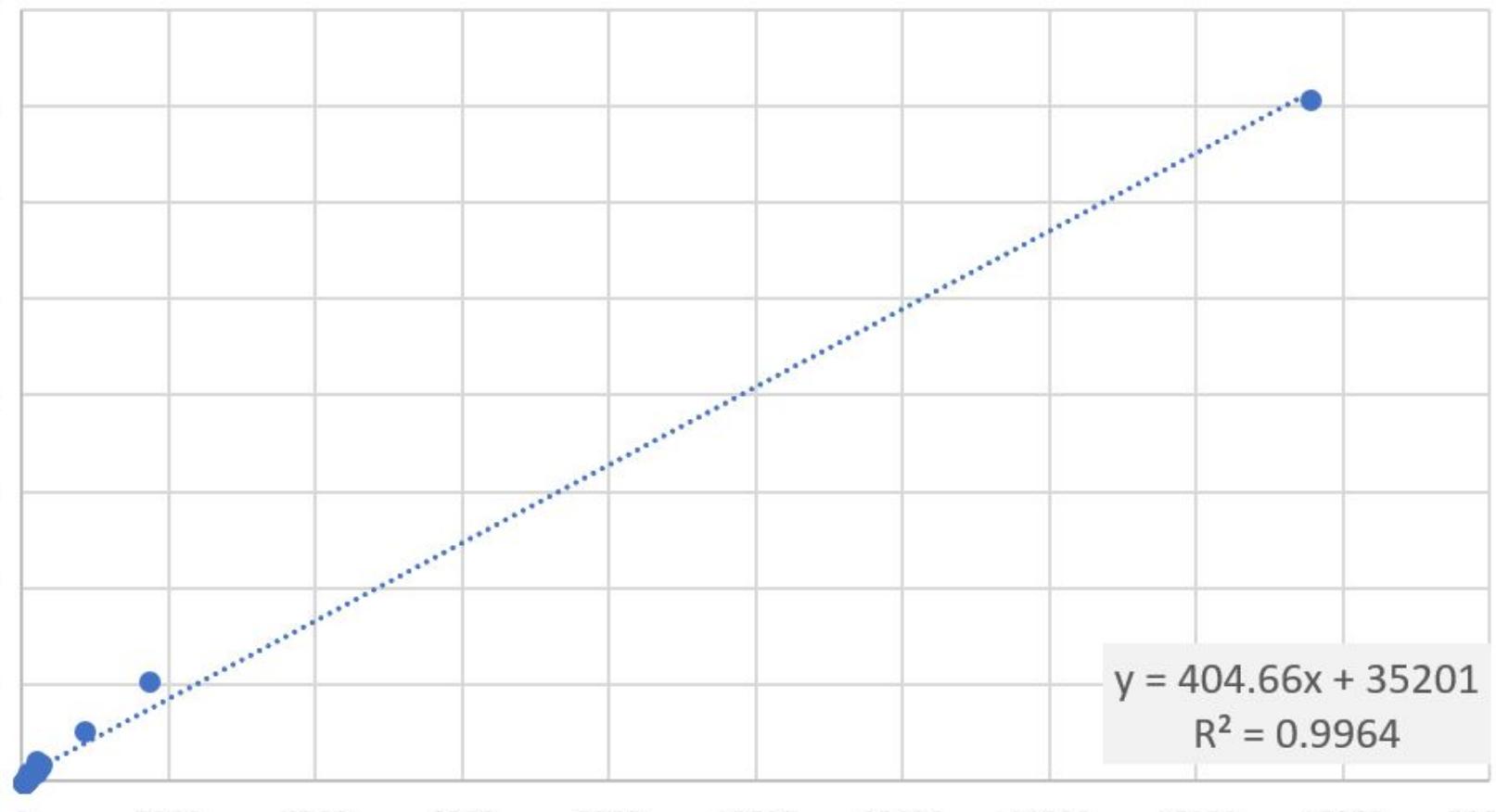
3000000

2000000

1000000

0

Total Events Attended

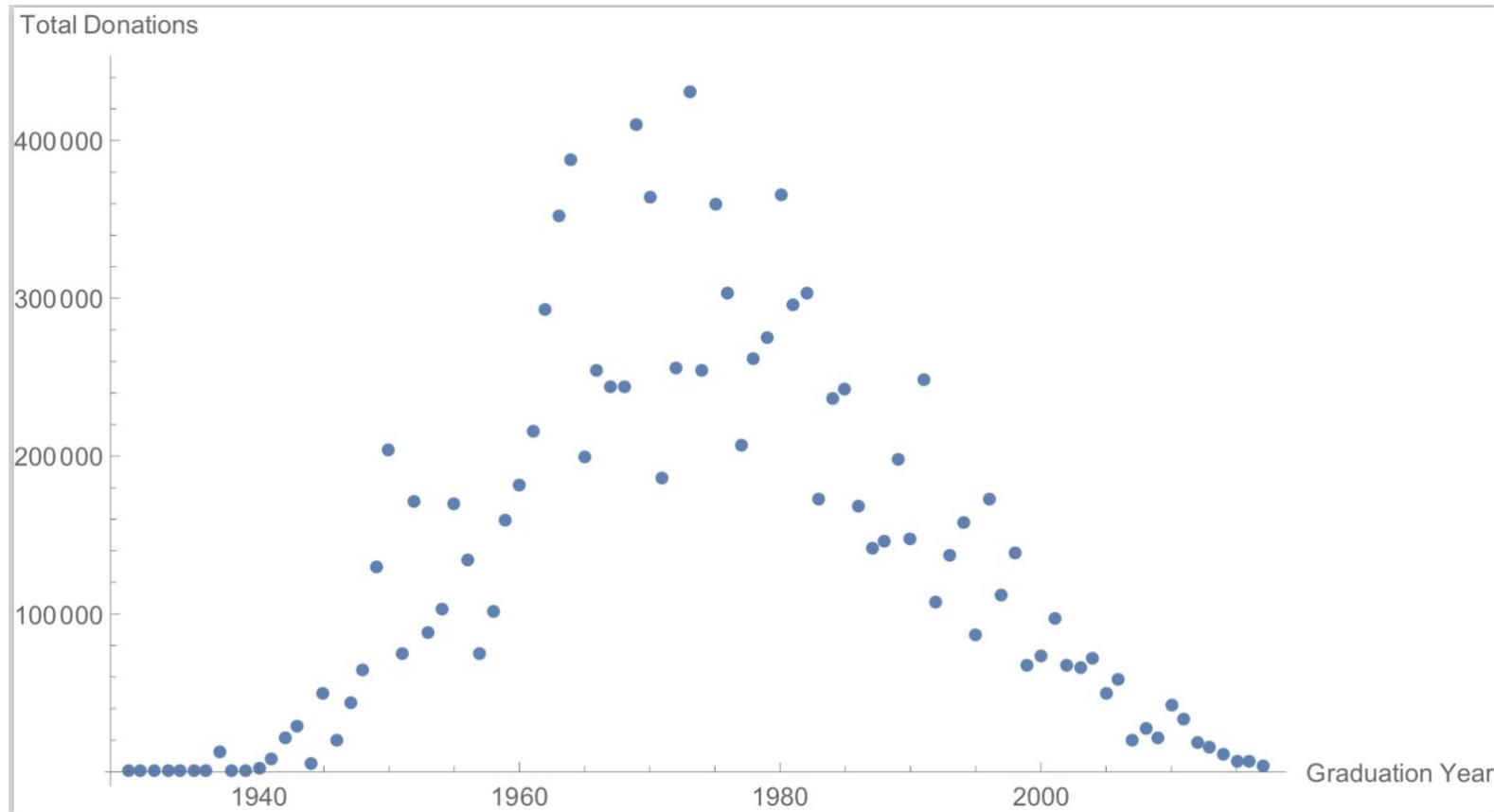


$$y = 404.66x + 35201$$

$$R^2 = 0.9964$$

Analysis

Analysis: Graduation Year and Alumni Giving

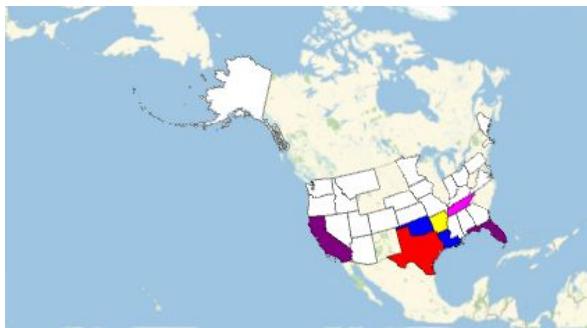


Analysis: Graduation Year and Alumni Giving

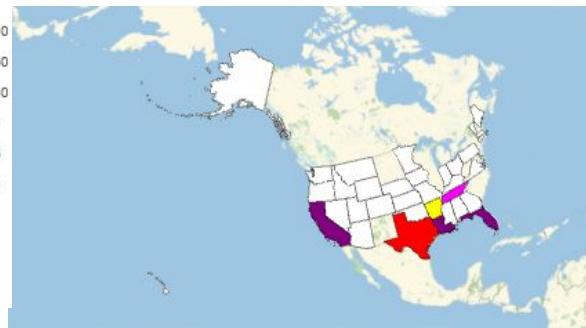
- Total donations by alumni every year from 1940-2017
- Alumni who graduated in the 70s donated more
- Probably due to being out of college for 20-25 years

Alumni Distribution by Graduation Decade

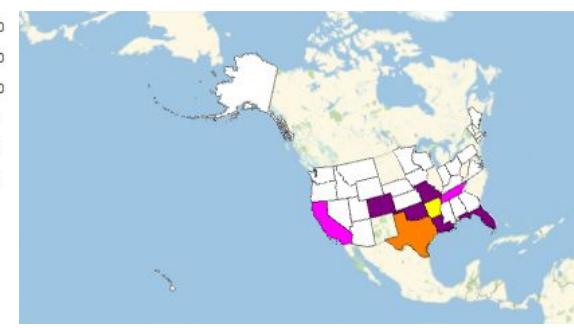
1961-1970



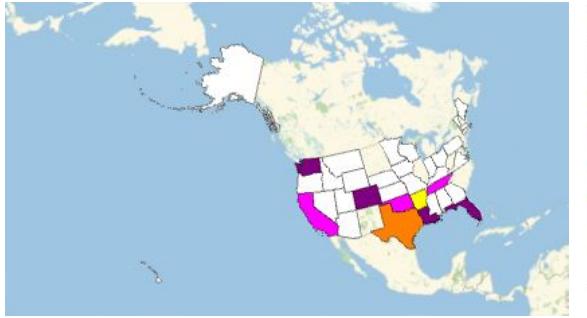
1971-1980



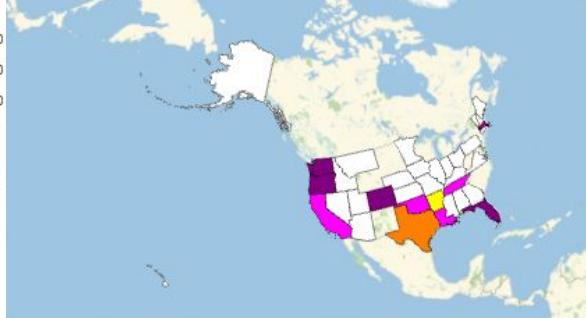
1981-1990



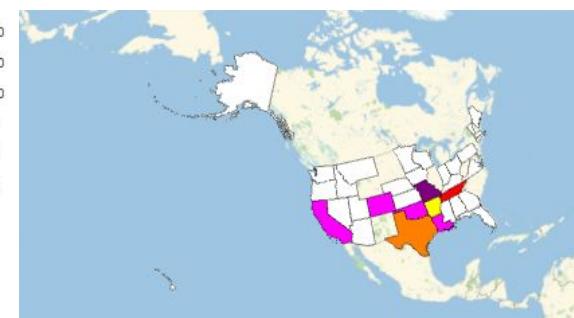
1991-2000



2001-2010



2011-2020

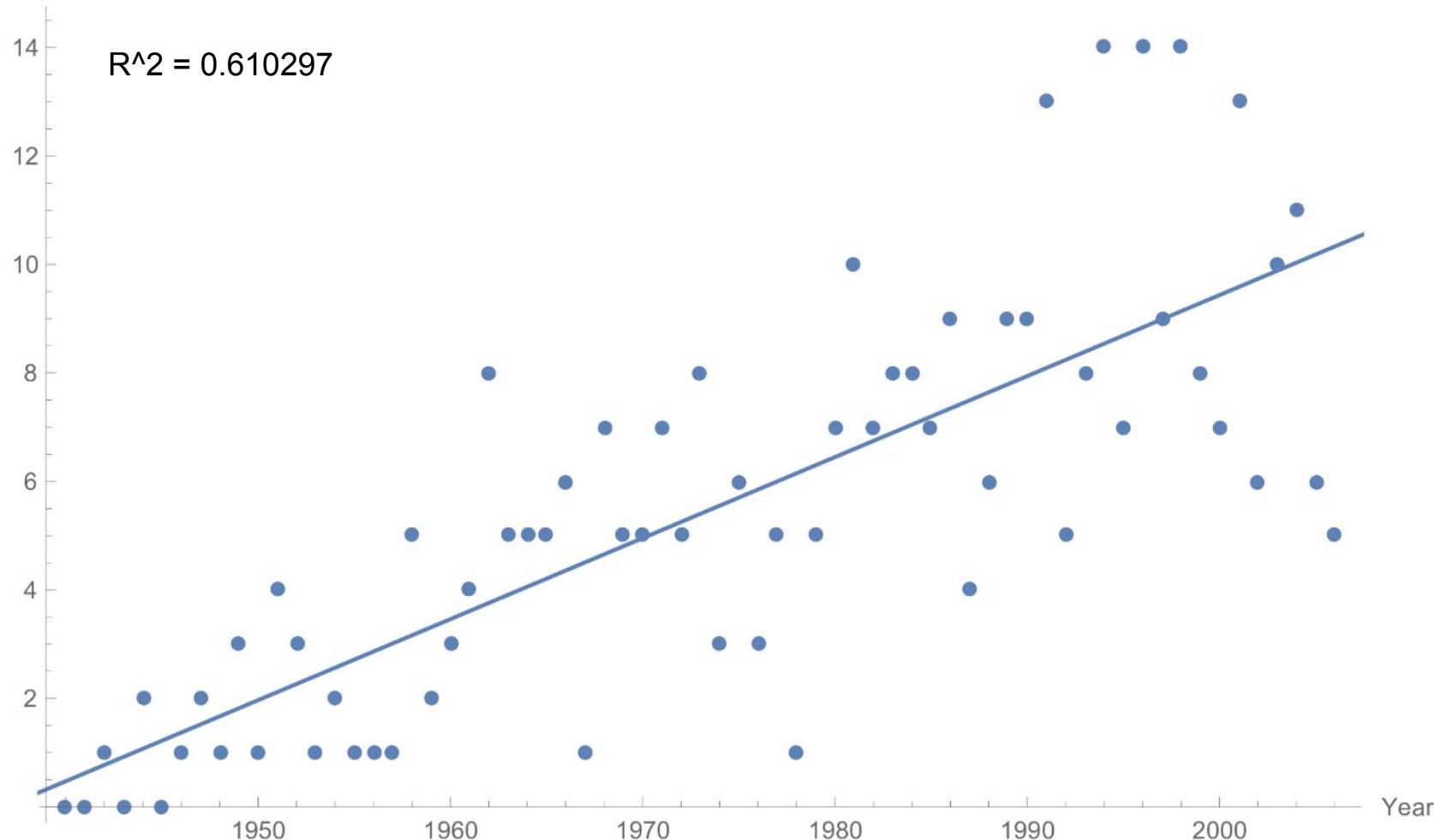


Alumni Growth

California

Alumni

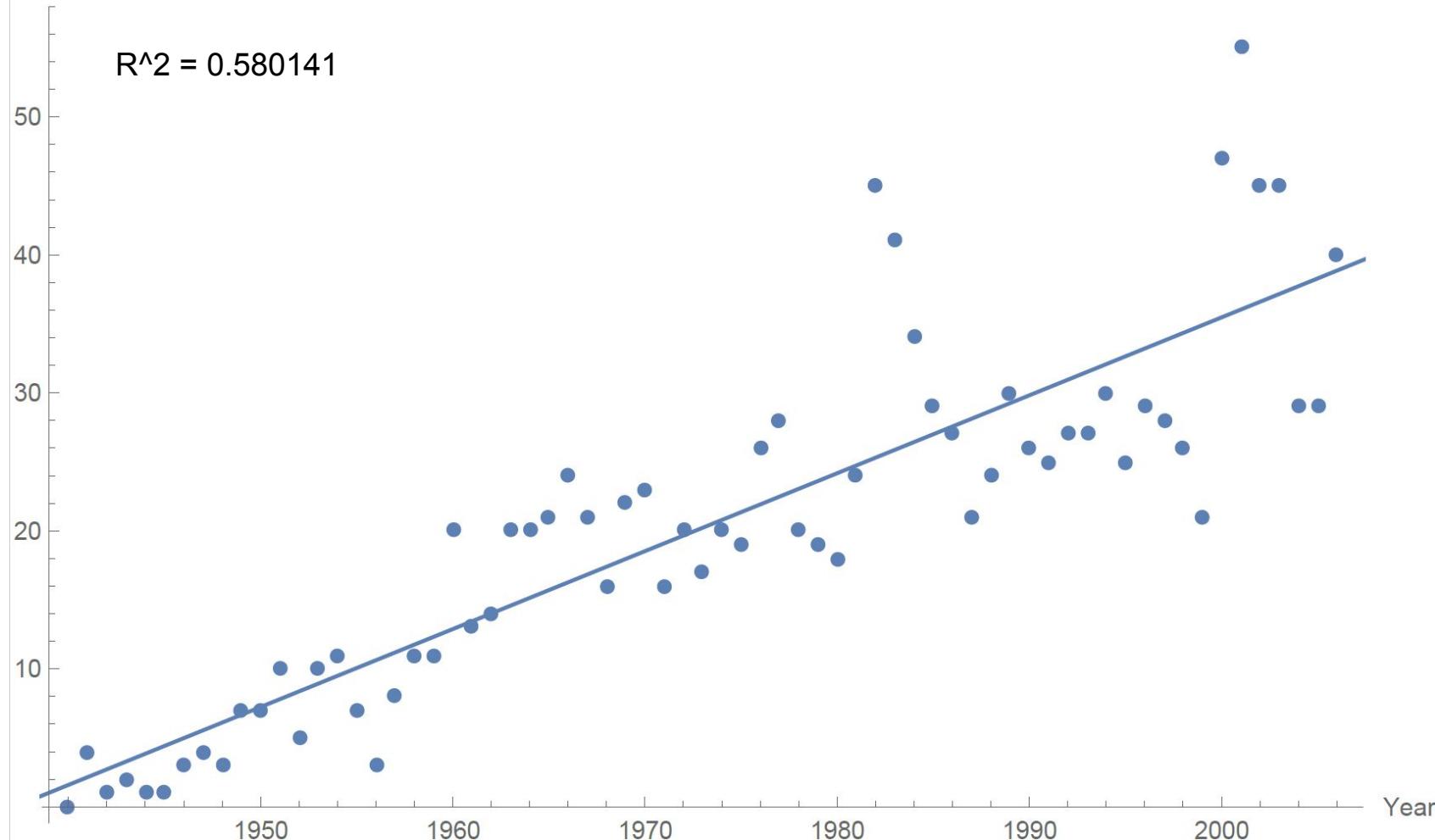
$R^2 = 0.610297$



Tennessee

Alumni

$R^2 = 0.580141$

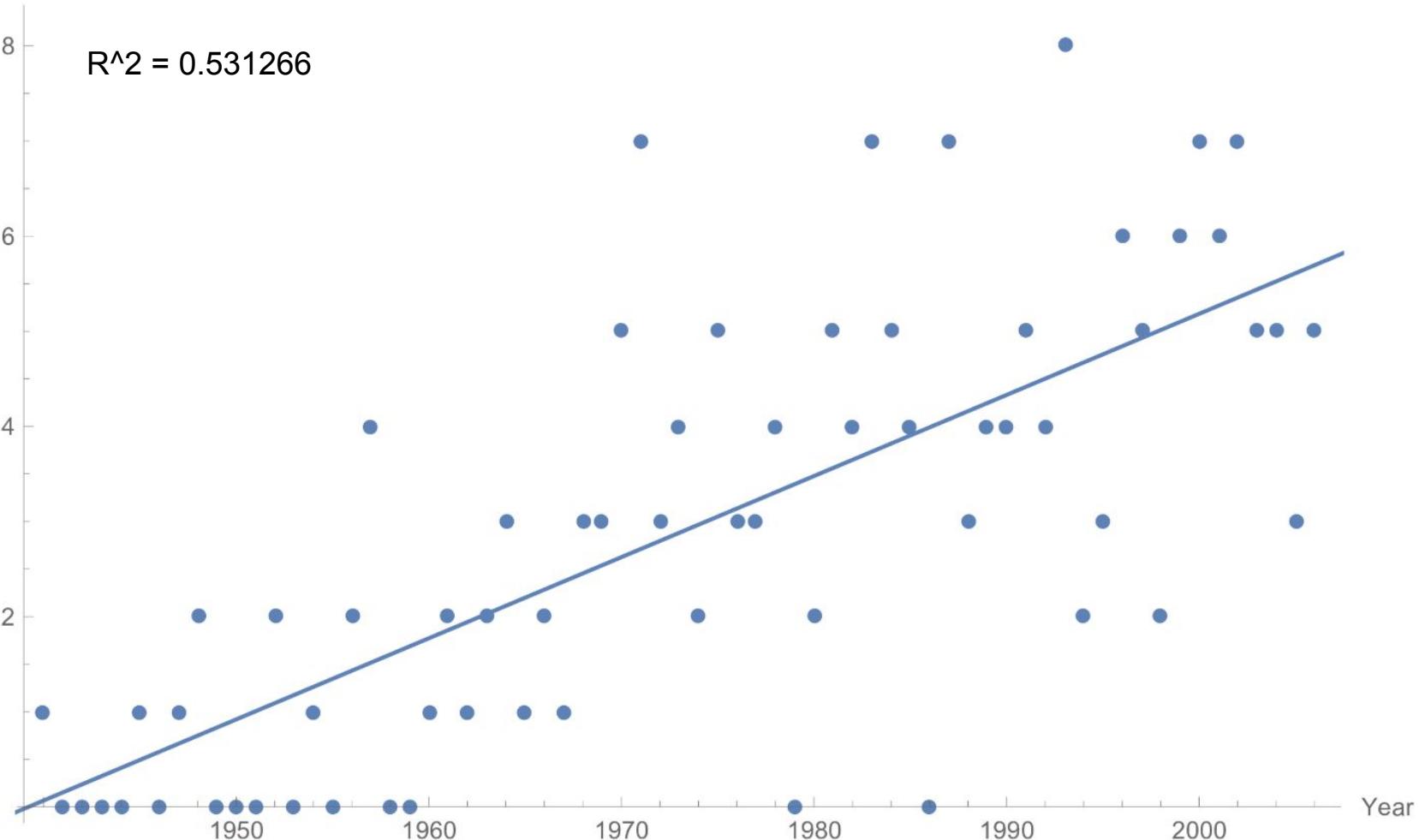


Year

Colorado

Alumni

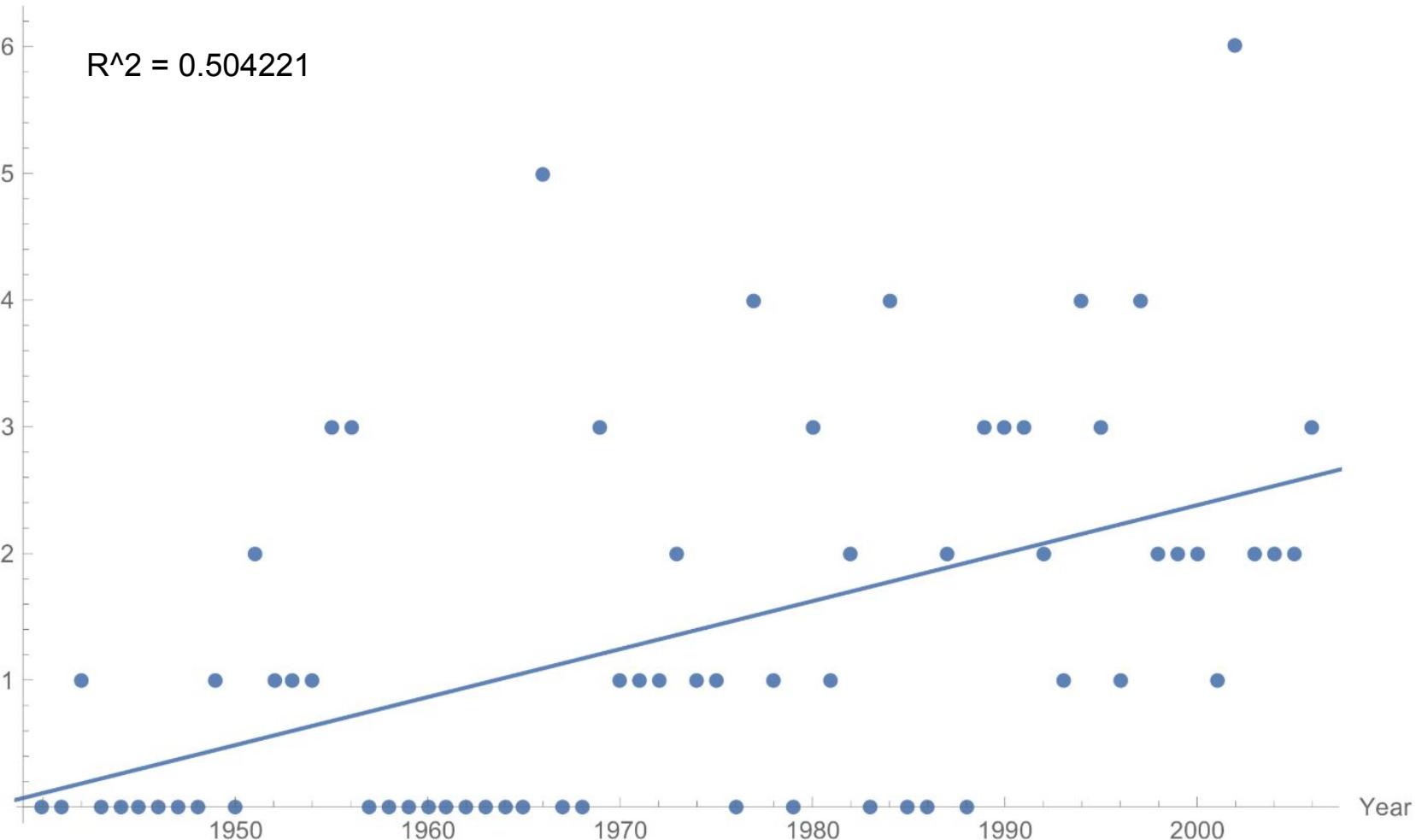
$$R^2 = 0.531266$$



Oklahoma

Alumni

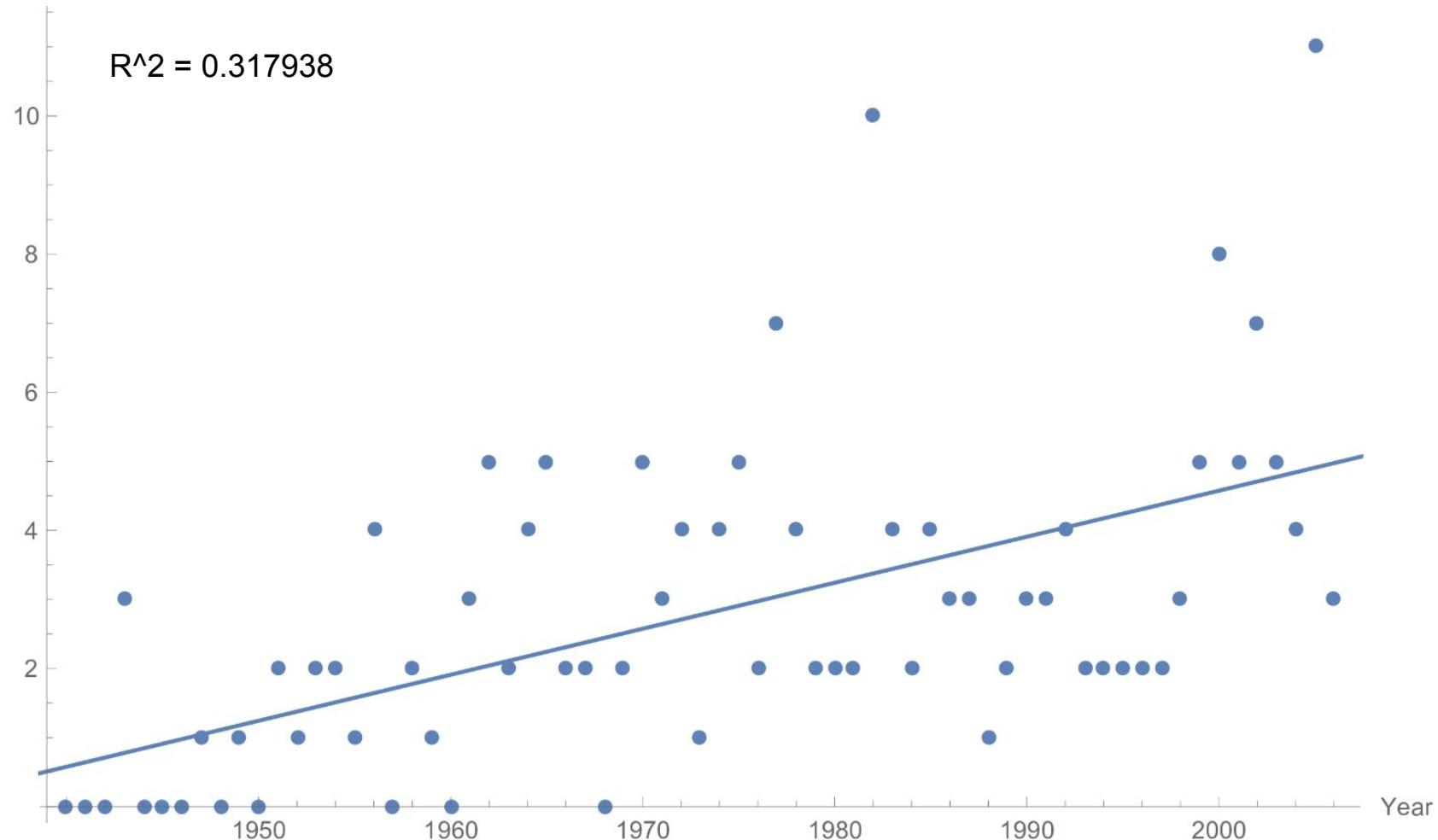
$R^2 = 0.504221$



Louisiana

Alumni

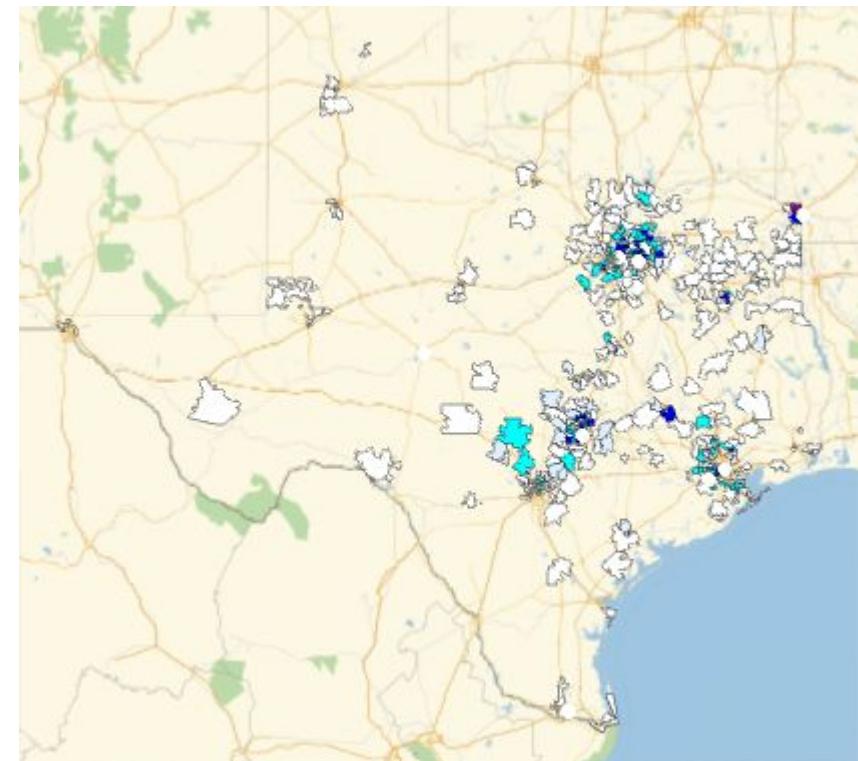
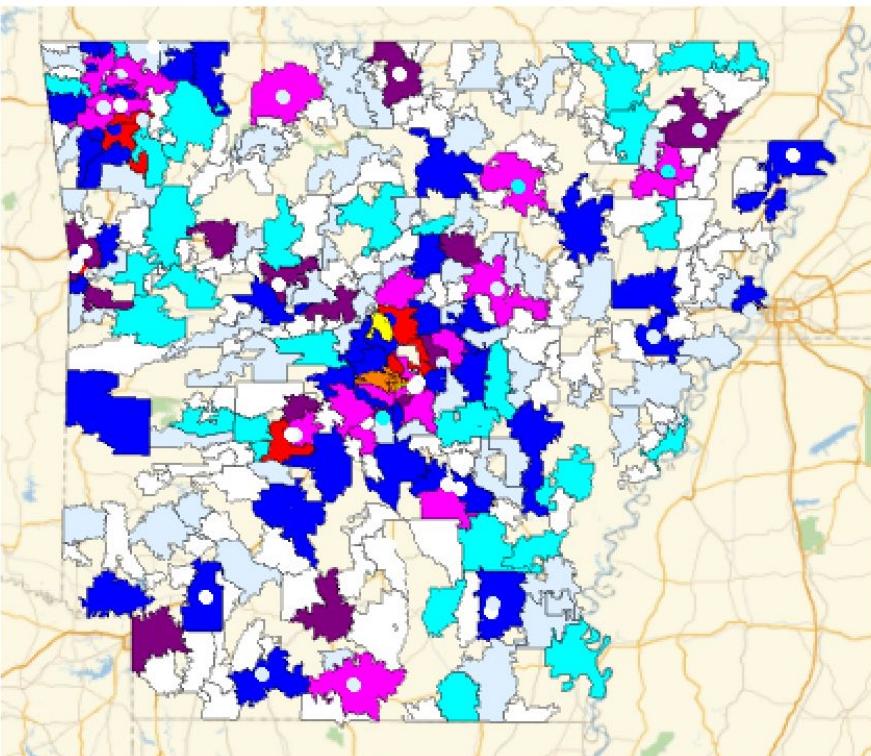
$R^2 = 0.317938$



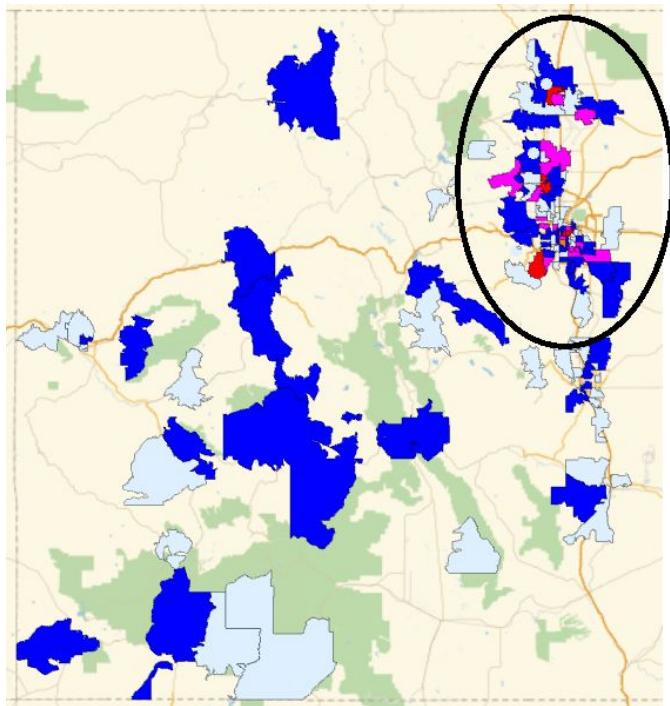
Alumni Concentrations

Arkansas Alumni

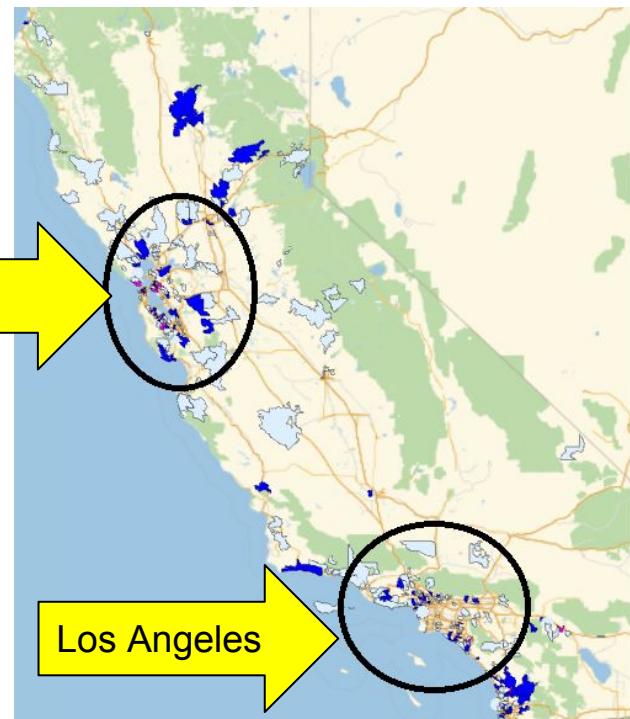
Texas Alumni



Colorado



California

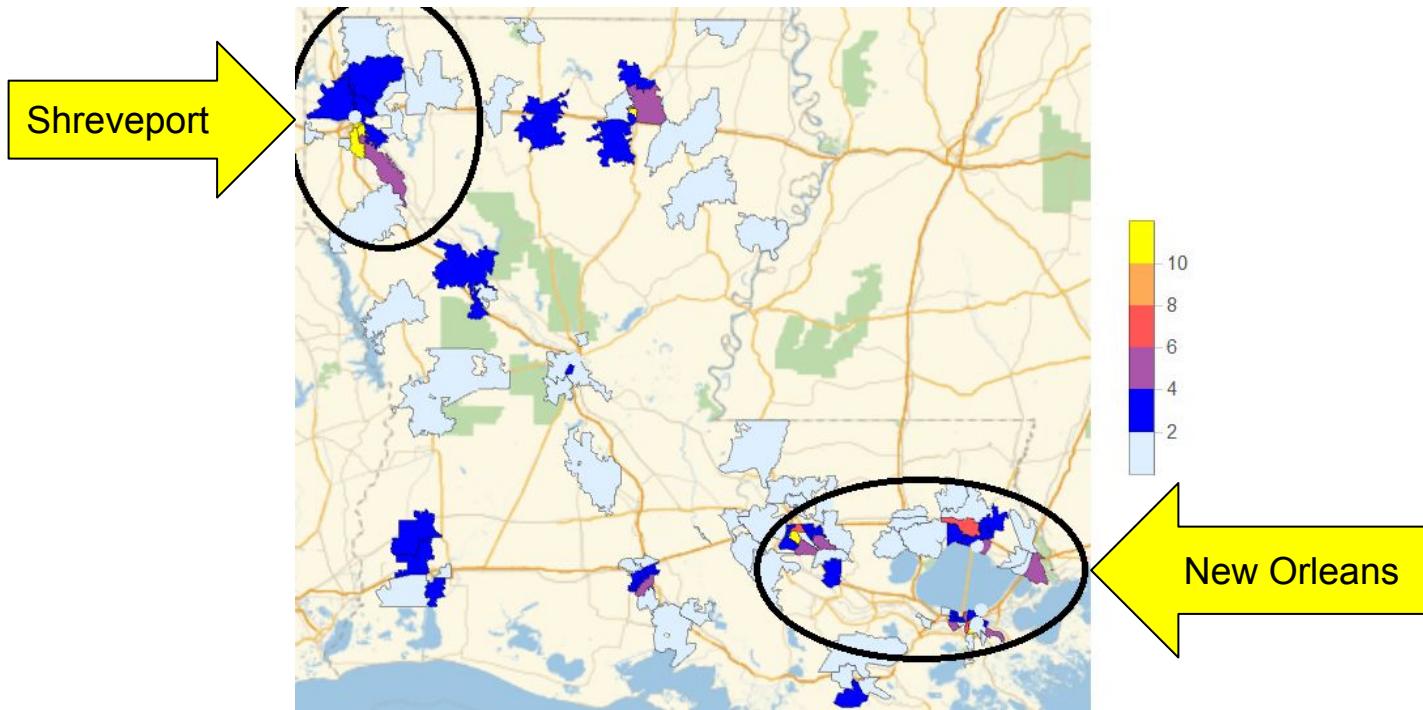


Denver

San Francisco

Los Angeles

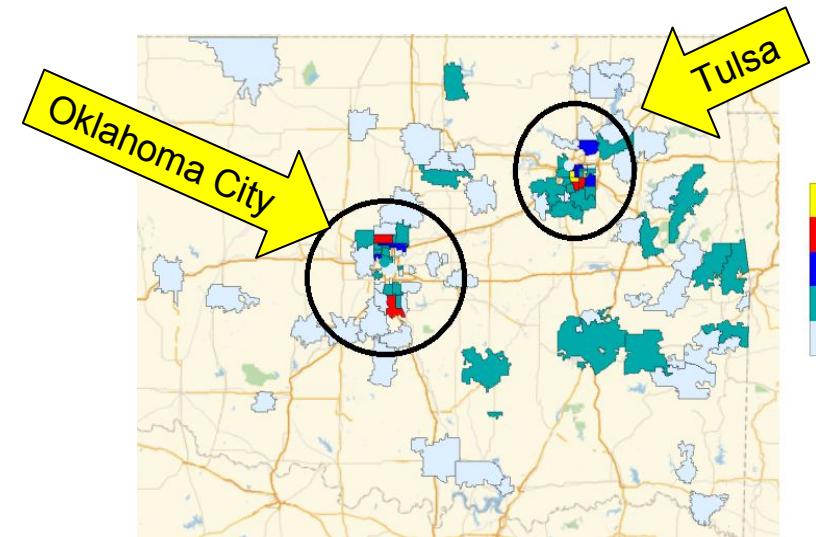
Louisiana



Tennessee



Oklahoma



Policy Suggestions

Where we should hold future events

- California
 - San Francisco
 - Los Angeles
- Colorado
 - Denver
- Louisiana
 - Shreveport
 - New Orleans
- Tennessee
 - Memphis
 - Nashville
- Oklahoma
 - Tulsa
 - Oklahoma City

Thank You

Questions

Comments

Critiques
