



Trends in College Education

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Project Overview

- Find the effect of various factors on graduation rates.
 - SAT scores, financial aid, type of school.
 - Two sets of graduates: 4 years and 6 years.
- How many people graduated college in the US?
- Which state has the most amount of graduates?
 - Within this state, which year had the most graduates?
 - Explore why this state had the most.
- Which school has a higher graduation rate: public, private for profit, or private non-profit?
 - In US and chosen State.
- Does financial aid and SAT scores in the chosen State affect graduation rates?



Data Cleaning

Data Source:

2002-2013

Data.World : <http://www.data.world/databeats/college-completion>

Files: cc_institution_details.csv

Cc_institution_grads.csv

2002-2013

Census.gov: <http://www2.census.gov/program-surveys/popest/tables/2000-2009/state/totals>

[Index of /programs-surveys/popest/tables/2009-2009/state/totals \(census.gov\)](http://www2.census.gov/program-surveys/popest/tables/2009-2009/state/totals)

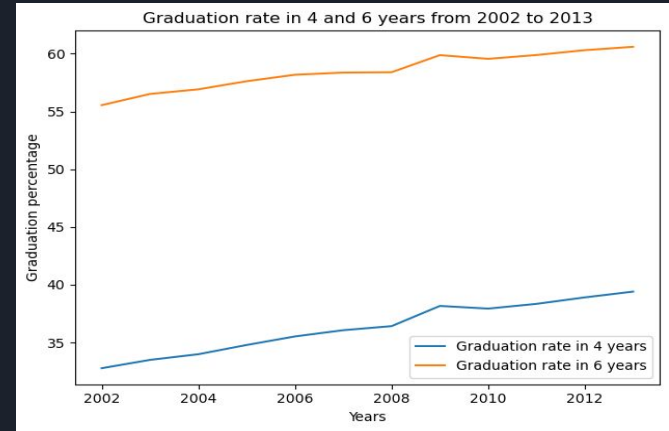
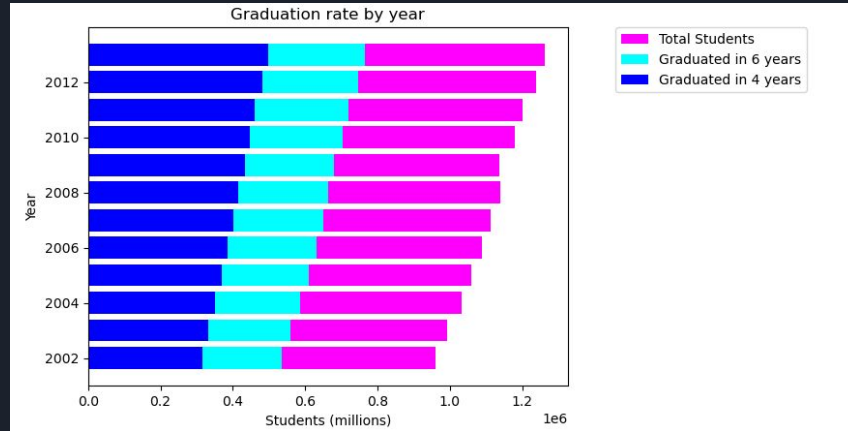
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[Index of /programs-surveys/popest/tables/2010-2015/state/totals \(census.gov\)](http://www2.census.gov/program-surveys/popest/tables/2010-2015/state/totals)

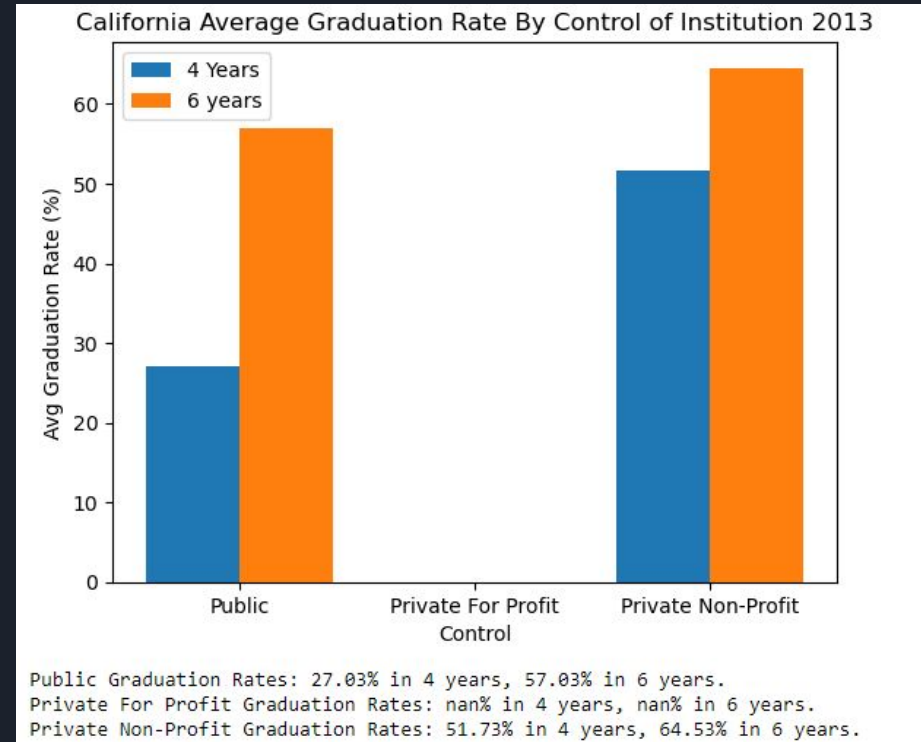
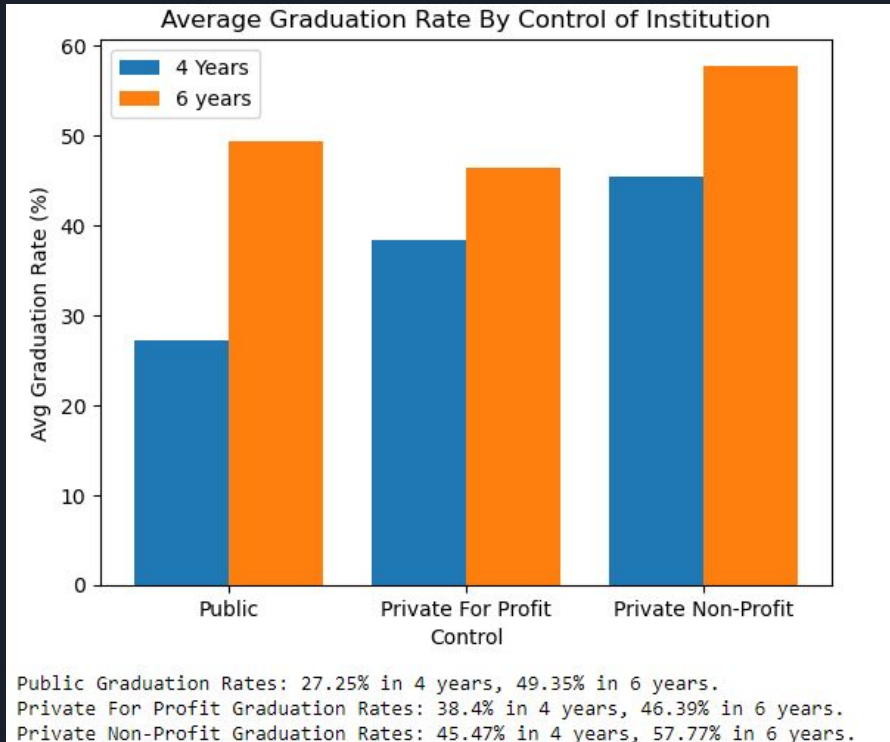
Files: nst-est2009-01.csv

nst-est2015-01.csv

Graduation rates in the US.

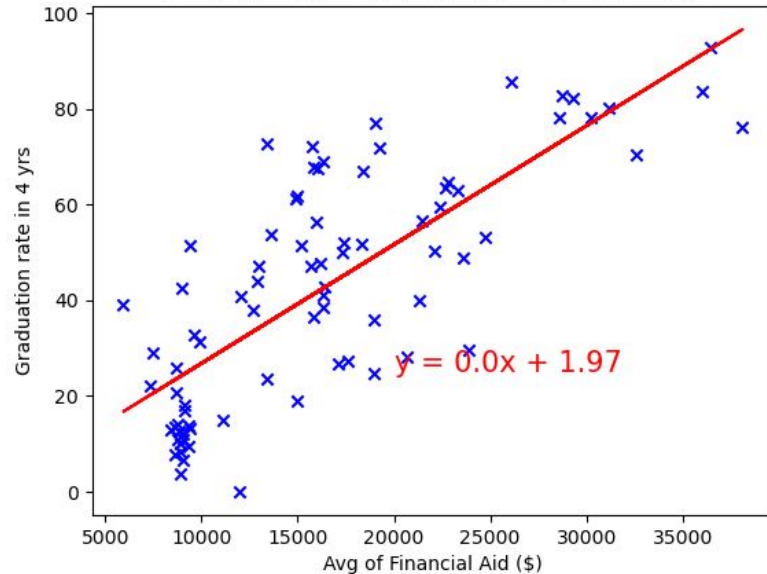


Graduation Rates by Control of Institution



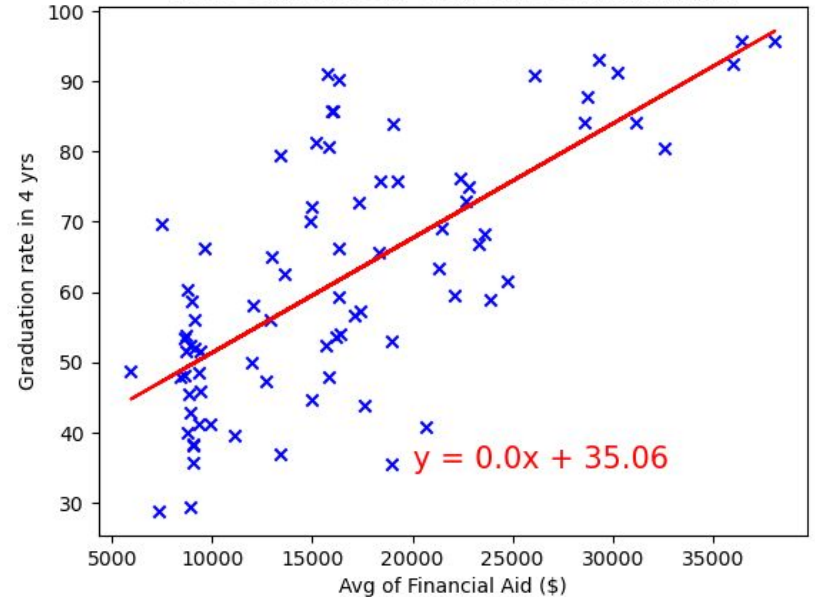
Graduation Rate vs Financial Aid

2013 California 4 yr Grad Rate vs Financial Aid



The r-squared is: 0.5937351931789805
The line equation is: $y = 0.0x + 1.97$
The correlation is 0.77

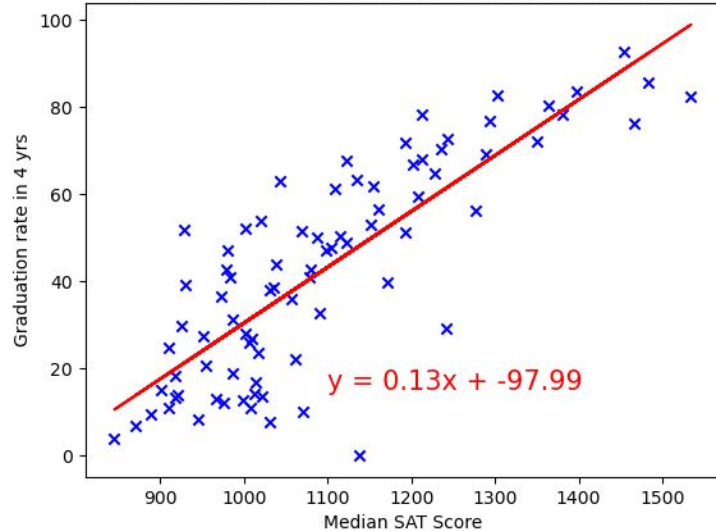
2013 California 6 yr Grad Rate vs Financial Aid



The r-squared is: 0.49197734353971045
The correlation is 0.7

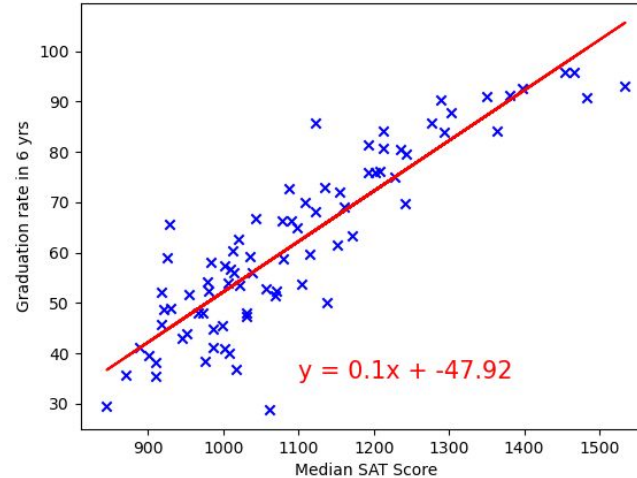
Graduation Rate vs Median SAT Score

2013 California 4 yr Grad Rate vs Median SAT Score



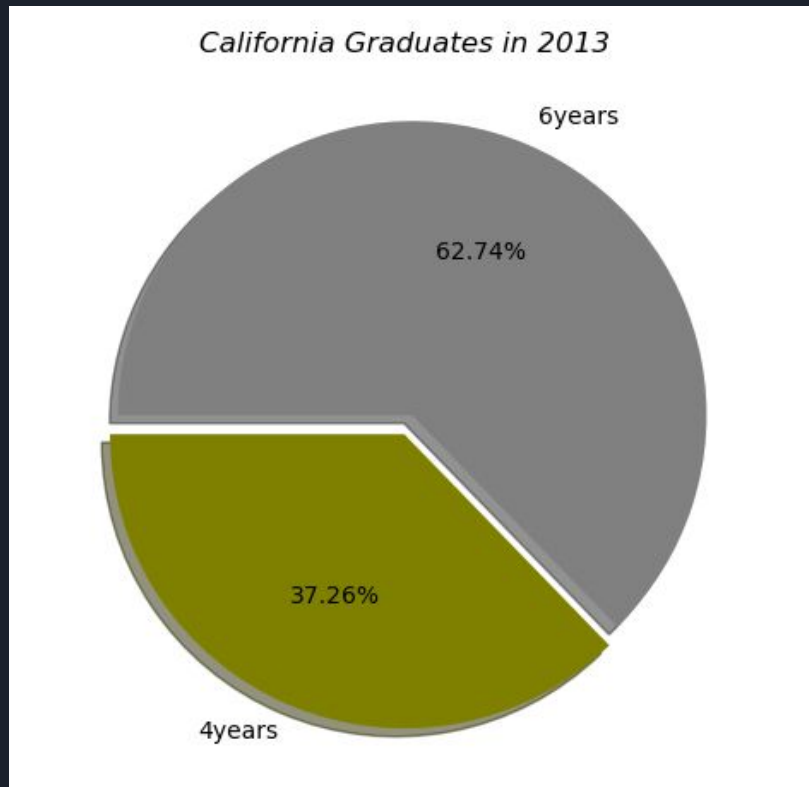
The r-squared is: 0.671744731074603
The line equation is: $y = 0.13x - 97.99$
The correlation is 0.82

2013 California 6 yr Grad Rate vs Median SAT Score



The r-squared is: 0.7856672700643359
The line equation is: $y = 0.1x - 47.92$
The correlation is 0.89
Hypothesis testing:
Null hypothesis: SAT Scores do not impact graduation rates.
p-value is: 3.807829927024991e-28 therefore we can confirm that the SAT has a direct correlation to graduation rates.

Percentage of 4 and 6 Year Graduates in CA





Conclusions

- The amount of financial aid has a small effect on graduation rates.
- SAT scores has a strong correlation to graduation rates.
 - Very low p-value.
- Number of graduates has increased every year.
- Non-profit schools have higher graduation rates in the whole country.
 - Can't attribute this to California's graduates, public schools did best here.
- Most graduates in California took 6 years.



Questions?