Assignment 2: Report

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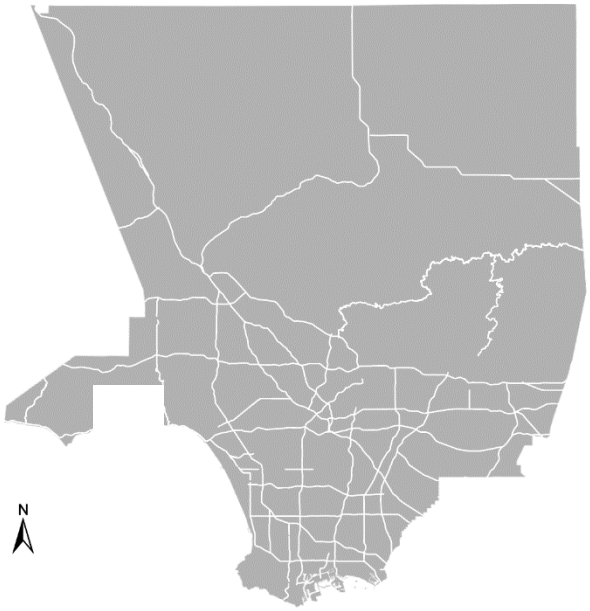
Instructions: For each continuous variable in your dataset, calculate the sample mean, the sample standard deviation, the 95-percent confidence interval for the population mean, and the interquartile range. Create a histogram to illustrate the distribution of each variable and describe the distribution in a sentence or two.



List of variables (from Assignment 1)

1. Median Age (continuous) : med_ageE
2. Part of the total population unemployed in civilian labor force (age 16 years and above) (continuous): pct_unemp_labor
3. Part of the total population who are high school graduates (or equivalent) in labor force (continuous): pct_hs_grad
4. Majority race of the population (categorical) : maj_race_tract
5. Whether the majority of the population is foreign born or not(categorical): maj_foreign

Distribution of Continuous Variables

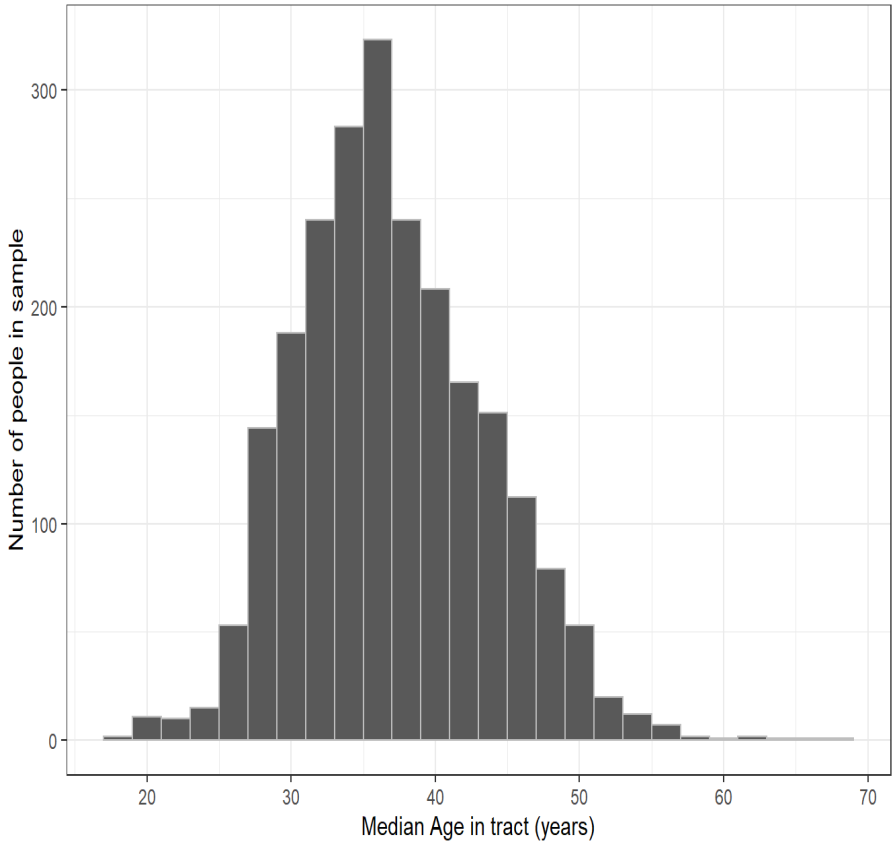
Descriptive Statistics

Characteristics of Census Tracts in Los Angeles County

Statistic	*Median Age (years)*	*Percent unemployed*	*Percent high-school graduate workers*
Sample Mean	37.1	3.55%	8.4%
Median	36.4	3.32%	8.67%
Standard Deviation	6.59	1.71%	4.25%
Interquartile Range	32.4 to 41.3	2.38% to 4.51%	5.69% to 11%
Population Mean	36.8 to 37.3	3.48% to 3.62%	8.23% to 8.58%

Distribution of Continuous Variables (cont.d)

Histograms

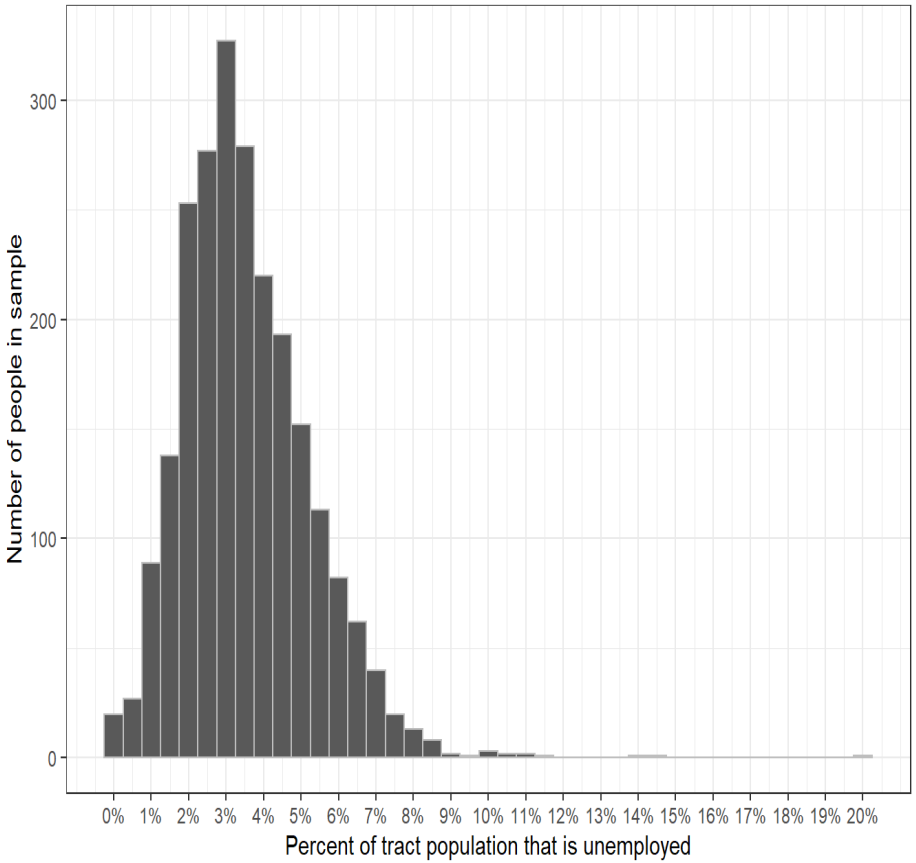


Median Age

The distribution looks relatively normal, with a slightly positive, right-skew. The median value is less than the corresponding mean value, because there are a greater number of outliers within the older population, affecting the mean value.

Distribution of Continuous Variables (cont.d)

Histograms

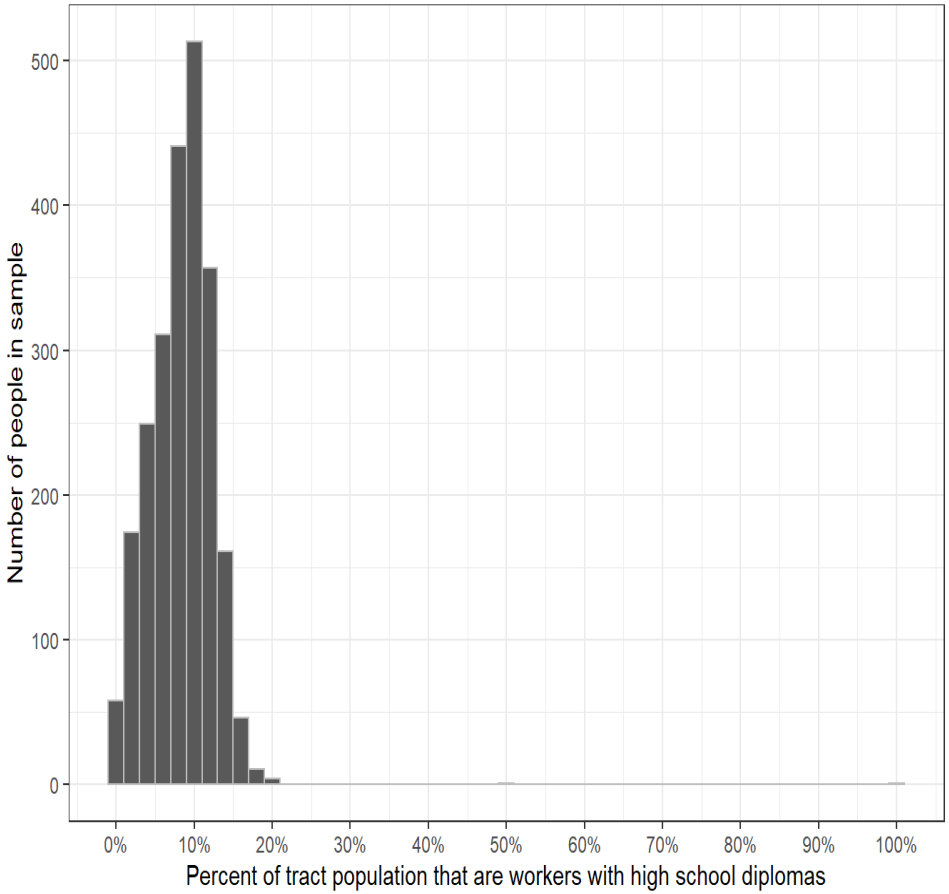


Unemployment

The distribution of unemployment is similar to median age in that it is relatively normal, with a slightly positive, right-skew. The median value is less than the corresponding mean value, because there are a greater number of outliers located along our x axis, where unemployment percentage increases.

Distribution of Continuous Variables (cont.d)

Histograms



Worker Education

The data skews negatively to the left. Although there are significant outliers located to the right of the mean and median, there still remains a greater number of observations closer to 0%. This explains why the median value is greater than the mean.

Distribution of Categorical Variables

Descriptive Statistics

Race/Ethnicity Statistics for Census Tracts in Los Angeles County

Majority Race	*Sample Proportion*	*95-percent confidence interval*
Hispanic/Latino	46.2%	44.2% to 48.2%
White (not Hispanic/Latino)	23.2%	21.5% to 24.9%
No Majority	23%	21.3% to 24.7%
Asian (not Hispanic/Latino)	5.29%	4.38% to 6.19%
Black (not Hispanic/Latino)	2.26%	1.66% to 2.86%

Nativity Statistics for Census Tracts in Los Angeles County

Majority Nativity	*Sample Proportion*	*95-percent confidence interval*
Native Born	88.3%	87% to 89.6%
Foreign Born	11.7%	10.4% to 13%