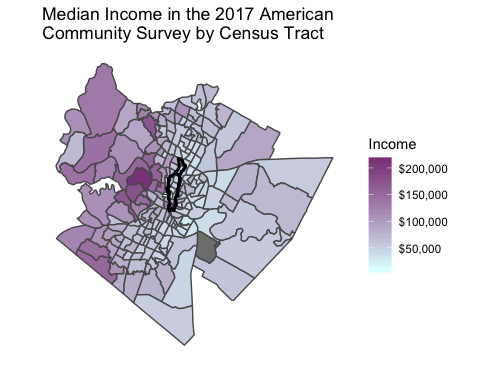
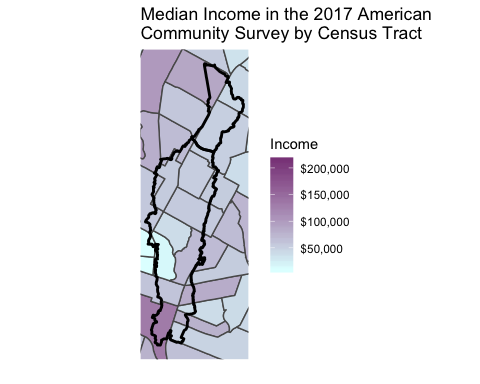
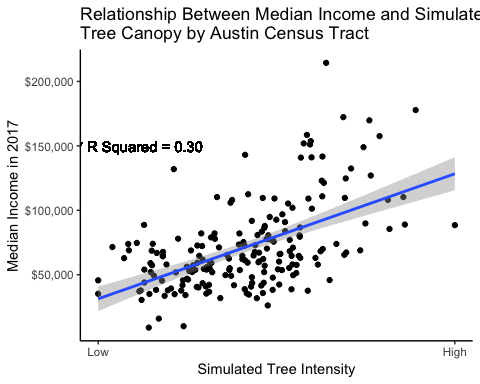
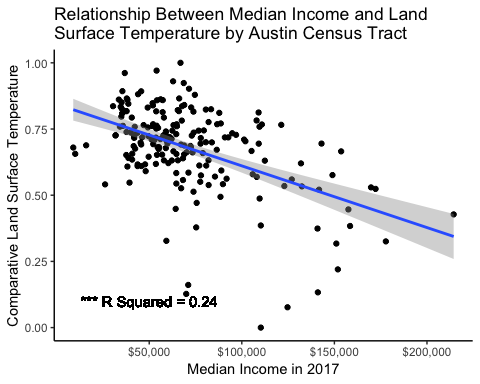
Urban Heat Island, Tree Cover, and the 2017 American Community Survey

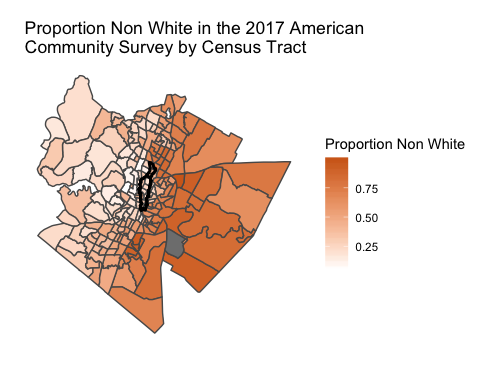
Several census tracts were missing from the American Community Survey data download. I am sure this data exists, missing tracts will need to be individually searched for and added to the dataset. 

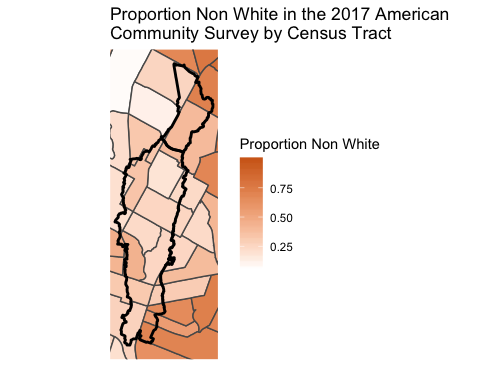


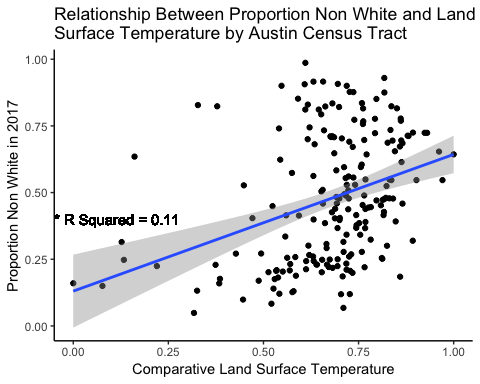


##   
## Call:  
## lm(formula = uhi.x ~ median\_income, data = census\_social)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -0.58690 -0.06760 0.00732 0.08878 0.31202   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 8.438e-01 2.324e-02 36.317 < 2e-16 \*\*\*  
## median\_income -2.330e-06 2.938e-07 -7.931 1.65e-13 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 0.1395 on 195 degrees of freedom  
## (3 observations deleted due to missingness)  
## Multiple R-squared: 0.2439, Adjusted R-squared: 0.24   
## F-statistic: 62.9 on 1 and 195 DF, p-value: 1.653e-13

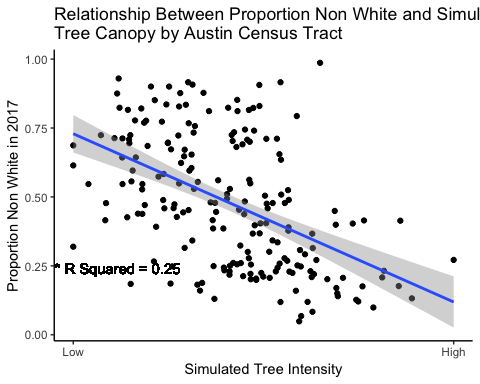








##   
## Call:  
## lm(formula = nonwhite ~ tree\_intensity, data = racial\_makeup)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -0.45254 -0.15008 -0.02489 0.14369 0.65325   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.293e-01 3.451e-02 21.134 < 2e-16 \*\*\*  
## tree\_intensity -6.216e+05 7.742e+04 -8.029 8.72e-14 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 0.207 on 197 degrees of freedom  
## (1 observation deleted due to missingness)  
## Multiple R-squared: 0.2466, Adjusted R-squared: 0.2427   
## F-statistic: 64.47 on 1 and 197 DF, p-value: 8.716e-14



mult\_uhi = lm(uhi.x~median\_income+nonwhite+tree\_intensity, data = racial\_makeup)  
summary(mult\_uhi)

##   
## Call:  
## lm(formula = uhi.x ~ median\_income + nonwhite + tree\_intensity,   
## data = racial\_makeup)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -0.65262 -0.05334 0.01666 0.07828 0.24322   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.237e-01 5.042e-02 18.321 < 2e-16 \*\*\*  
## median\_income -1.490e-06 3.793e-07 -3.929 0.000119 \*\*\*  
## nonwhite -2.580e-02 5.195e-02 -0.497 0.620007   
## tree\_intensity -3.139e+05 6.143e+04 -5.110 7.73e-07 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 0.1315 on 193 degrees of freedom  
## (3 observations deleted due to missingness)  
## Multiple R-squared: 0.3356, Adjusted R-squared: 0.3253   
## F-statistic: 32.5 on 3 and 193 DF, p-value: < 2.2e-16

mult\_ti=lm(tree\_intensity~median\_income+nonwhite, data = racial\_makeup)  
summary(mult\_ti)

##   
## Call:  
## lm(formula = tree\_intensity ~ median\_income + nonwhite, data = racial\_makeup)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -3.828e-07 -1.008e-07 -1.280e-08 1.039e-07 4.972e-07   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.487e-07 5.335e-08 6.536 5.45e-10 \*\*\*  
## median\_income 2.153e-12 4.155e-13 5.181 5.50e-07 \*\*\*  
## nonwhite -2.008e-07 5.899e-08 -3.405 0.000804 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.537e-07 on 194 degrees of freedom  
## (3 observations deleted due to missingness)  
## Multiple R-squared: 0.3398, Adjusted R-squared: 0.333   
## F-statistic: 49.93 on 2 and 194 DF, p-value: < 2.2e-16

stargazer(mult\_ti, type = "html")

Dependent variable:

tree\_intensity

median\_income

0.000\*\*\*

(0.000)

nonwhite

-0.00000\*\*\*

(0.00000)

Constant

0.00000\*\*\*

(0.00000)

Observations

197

R2

0.340

Adjusted R2

0.333

Residual Std. Error

0.00000 (df = 194)

F Statistic

49.931\*\*\* (df = 2; 194)

Note:

*p<0.1;* ***p<0.05;*** p<0.01