

How has Climate Change Impacted Washington D.C.?

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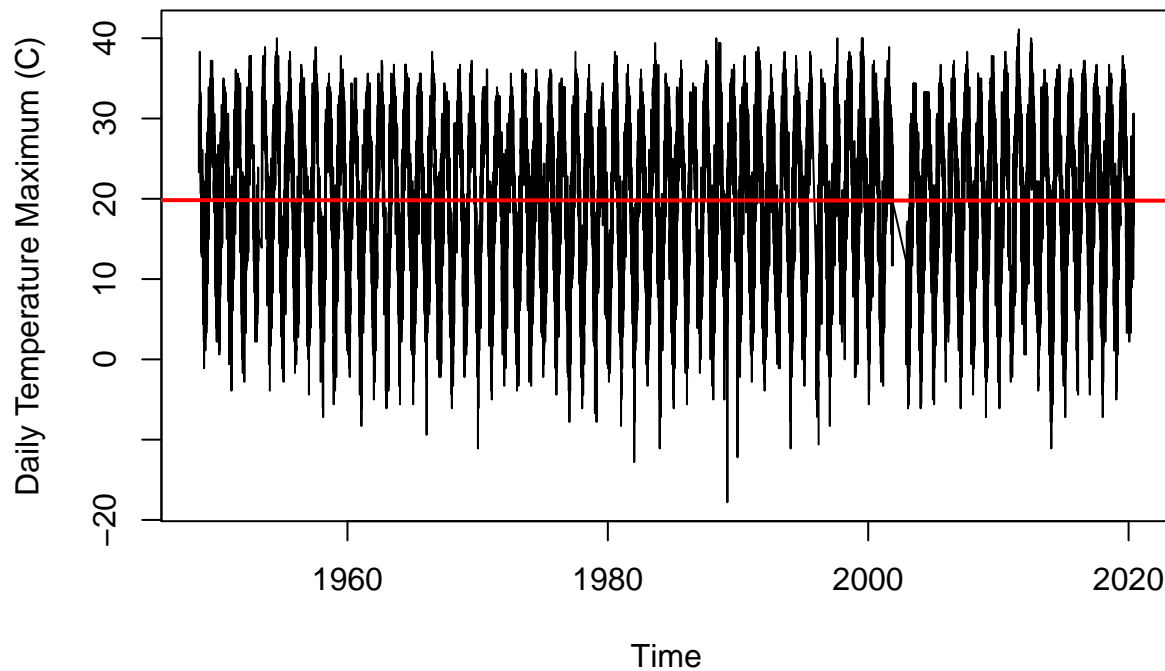
9/9/2020

Here is a draft of what my blog may look like!

Even though the slope on the temperature maximum graph is actually decreasing (meaning DC has gotten cooler), this correlation only has a p- value of .7895 which means that it is not significant.

```
##      (Intercept)      NewDate
## 1.981160e+01 -2.269816e-06
```

Washington D.C. Daily Temperature Maximum vs Time

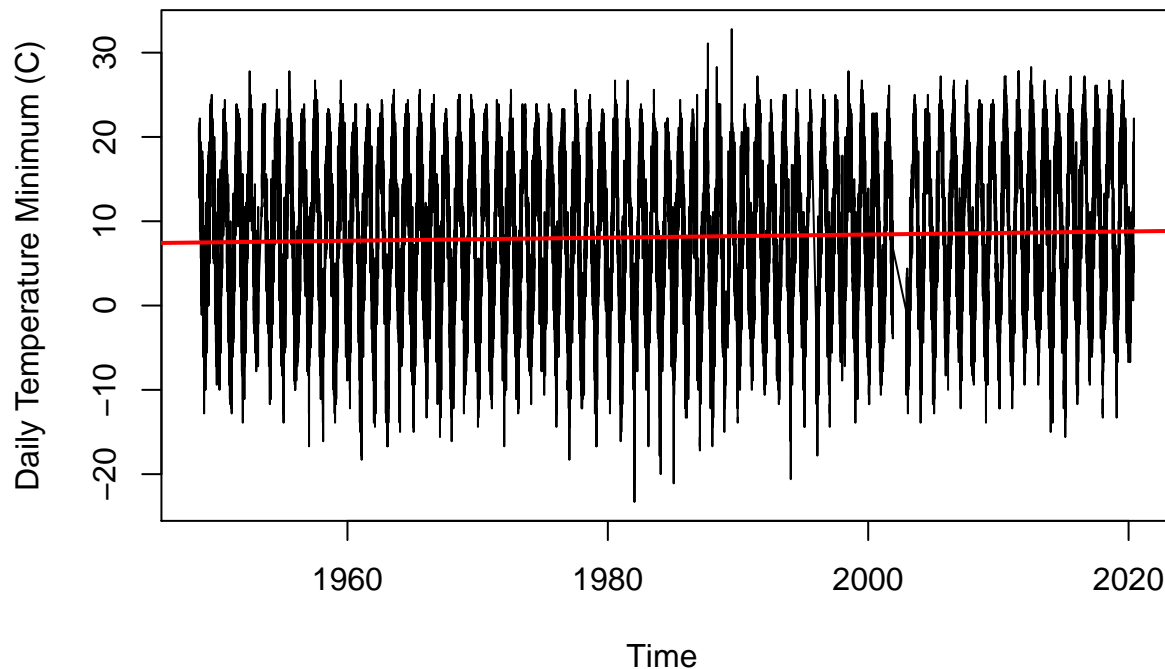


```
##
## Call:
## lm(formula = TMAX ~ NewDate, data = climate_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -37.596  -8.118   1.277   9.086  21.323
##
```

```
## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.981e+01  7.793e-02 254.226  <2e-16 ***
## NewDate      -2.270e-06  8.501e-06  -0.267   0.789
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 10.19 on 25133 degrees of freedom
## (333 observations deleted due to missingness)
## Multiple R-squared:  2.836e-06, Adjusted R-squared:  -3.695e-05
## F-statistic: 0.07129 on 1 and 25133 DF, p-value: 0.7895
```

While there is not a significant temperature maximum change, there is a very significant p value of 1.23×10^{-10} for daily temperature minimums since 1950. The positive slope on this graph indicates that in DC daily temperature minimums have gotten warmer.

Washington D.C. Daily Temperature Minimum vs Time



```
##
## Call:
## lm(formula = TMIN ~ NewDate, data = climate_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -31.3958  -7.5483  -0.1145   8.3228  24.5669
##
## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)  7.874e+00  7.170e-02 109.821  < 2e-16 ***
```

```
## NewDate      5.032e-05  7.816e-06   6.439 1.23e-10 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 9.359 on 25085 degrees of freedom
## (381 observations deleted due to missingness)
## Multiple R-squared:  0.00165,    Adjusted R-squared:  0.00161
## F-statistic: 41.46 on 1 and 25085 DF,  p-value: 1.227e-10
```

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.