ST 534 Project

Titus Dorsey

Jiatao Wang

Wenjin Liu

Reading in the data

The data can be found here. Just double click on the icon below and then save to your computer.

raleigh_temperature_
preprocessed.csv

```
*Reading in the data;
data temp;
*Put your file path here;
infile "C:\Users\Titus\Downloads\raleigh_temperature_preprocessed.csv"
dsd missover firstobs = 2;
attrib Raleigh informat = yymmdd10. format = mmddyy10.
T label = "Temperature";
input Raleigh T;
Run;
```

SAS Code

```
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ST534  Project
11/19/2021

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*Reading in the data;
data temp;
*Put your file path here;
```

```
infile "C:\Users\Titus\Downloads\raleigh_temperature_preprocessed.csv"
dsd missover firstobs = 2;
attrib Raleigh informat = yymmdd10. format = mmddyy10.
T label = "Temperature";
input Raleigh T;
Run;

*plot the data;
proc sgplot data = temp;
series x = Raleigh y = T;
run;

*visualize the data;
proc arima data = temp;
identify var = T nlag = 36;
run;

*difference and fit the data;
proc arima data = temp;
identify var=T nlag = 36;
*difference the data;
identify var=T(365) stationarity=(adf=0) nlag = 36;
run;
*fit the data;
estimate p=20;
estimate p=(1,2,3,6,13);

*further exploration with nlag = 1095;

proc arima data = temp;
identify var=T nlag = 1095;
*difference the data;
identify var=T(365) stationarity=(adf=0) nlag = 1095;
run;
*fit with the new more thorough model;
estimate p=(1,2,3,6,13) q =(365);run;
*forcast the data out a year;
forecast lead=365;
run;
```