Keeling Curve Demo Code

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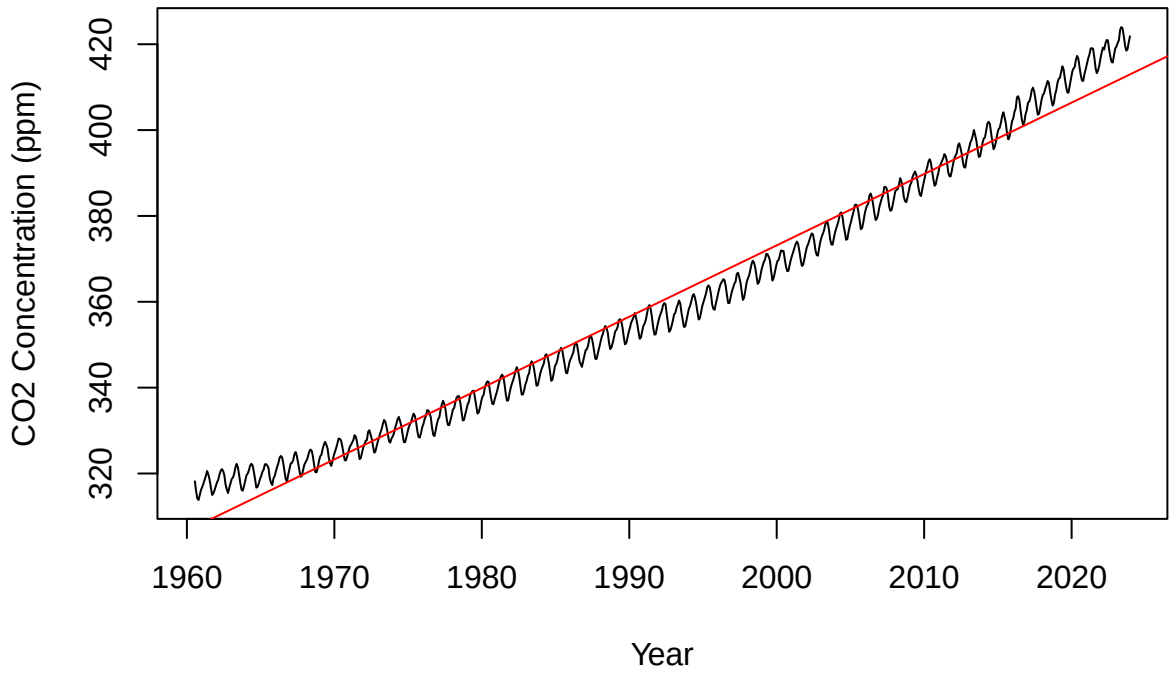
Read Data

```
filepath = here("02_keeling","Mauna_Loa.csv")
maunaloa <- read.csv(filepath)
```

Plot Data

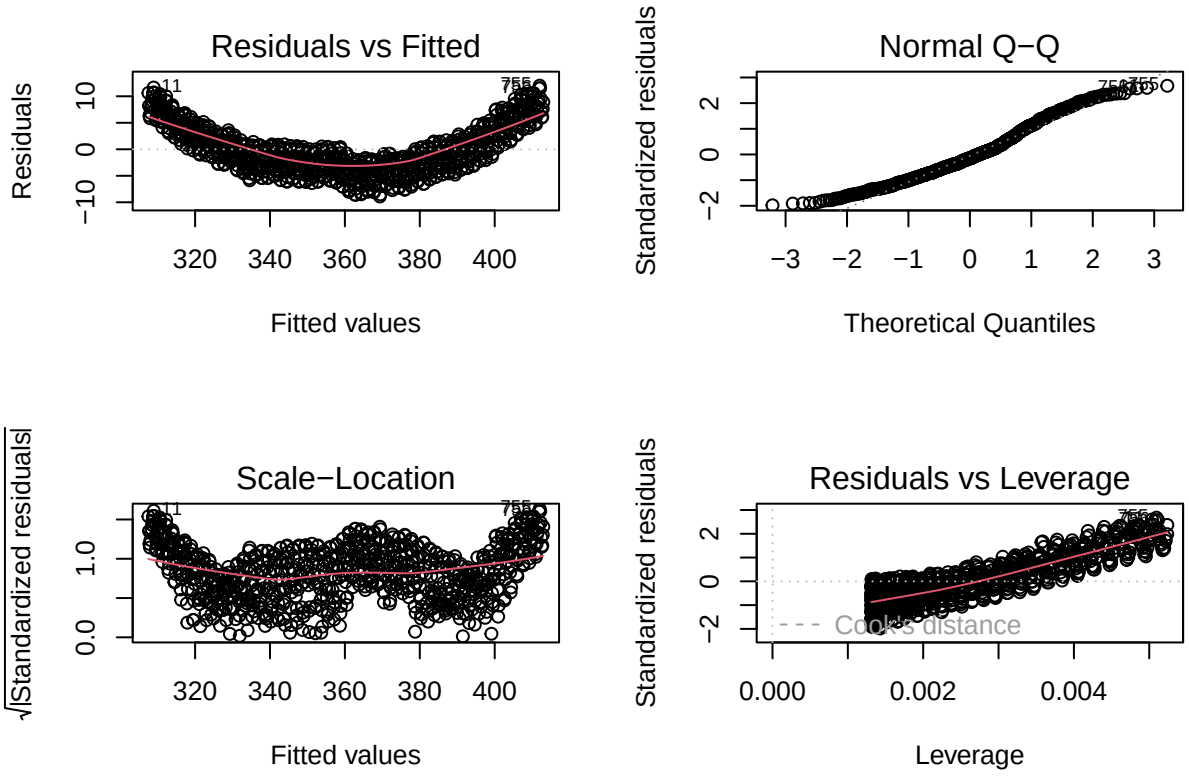
```
plot(average~decimal.date, data=maunaloa, ty="l", xlab="Year", ylab="CO2 Concentration (ppm)")

maunaloa.lm=lm(average~decimal.date, data=maunaloa)
abline(maunaloa.lm, col="red")
```



Check Assumptions

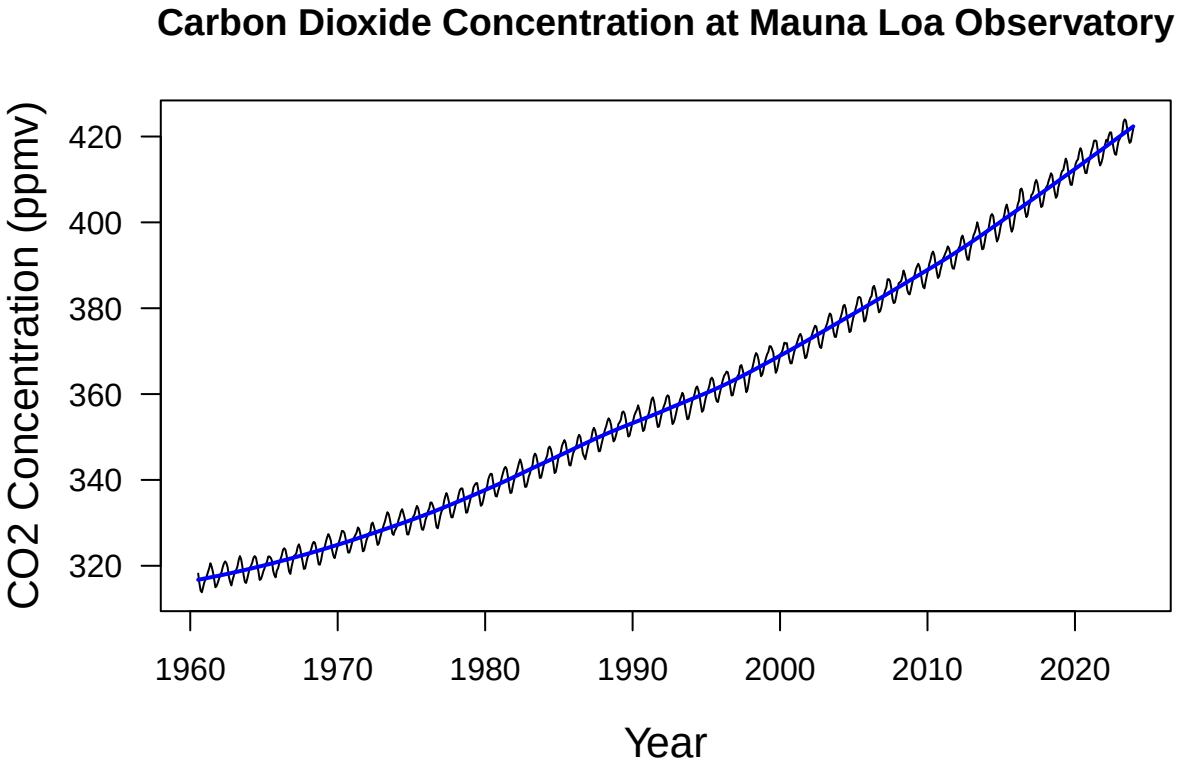
```
par(mfrow=c(2,2))
plot(maunaloa.lm)
```



Create Loess Plots

```
plot(average~decimal.date, data=maunaloa, ty="l", xlab="Year", ylab="CO2 Concentration (ppmv)", las=1, n

fitted <- loess(average~decimal.date, data=maunaloa, span=1/3)
lines(maunaloa$decimal.date, fitted$fitted, col="blue", lwd=2)
```



See handout for more details and more code and examples.