

Question: Autocorrection in weather

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1 load KeyWestAnnualMeanTemperature.Rdata

```
> ## data load  
> load("../Data/KeyWestAnnualMeanTemperature.RData")  
> ls()
```

```
[1] "ats"
```

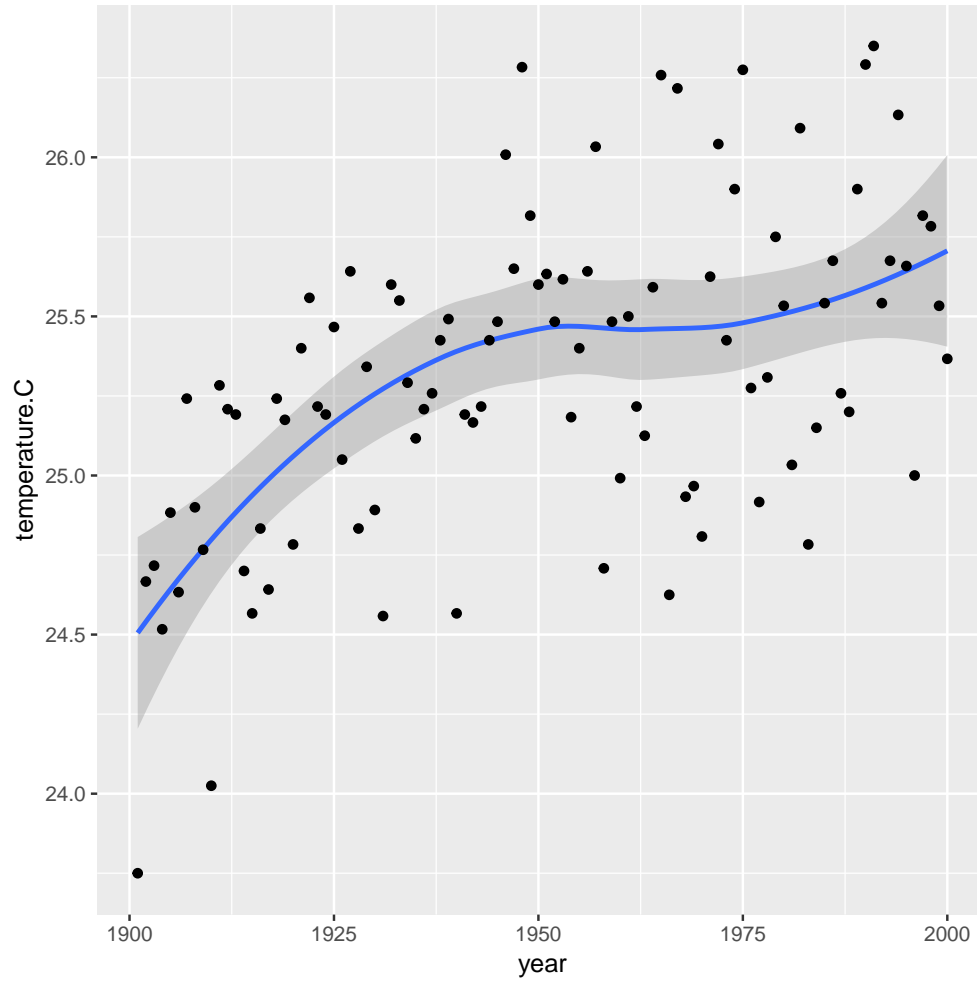
```
> ## libraries  
> library(ggplot2)  
> library(knitr)
```

2 examine data

```
> ## cor coef  
> print(b<-unlist(cor(ats,method = "spearman"))[1,2])
```

```
[1] 0.5255559
```

3 plot data



```
> ## cor coef (rand sample)
> dm<-1e4
> a<-rep(NA,dm);i<-1
> for(x in sample((dim(ats)[1]-1),dm,replace = T)){
+   a[i]<-unlist(cor(ats[(1:x),],method = "spearman"))[1,2]
+   i<-i+1
+ };rm(x,i,dm)
> ## approx p-val
> length(a[which(a>b)])/length(a)

[1] 0.498
```