Simiulation

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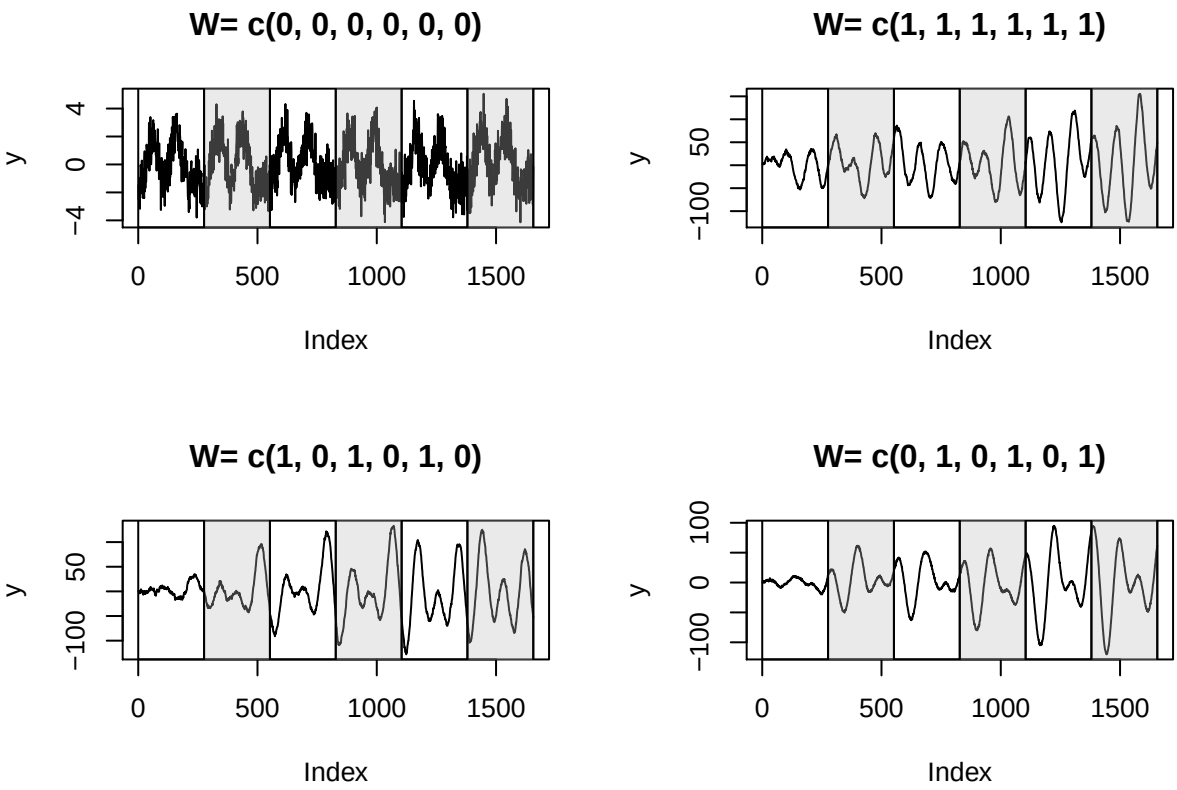
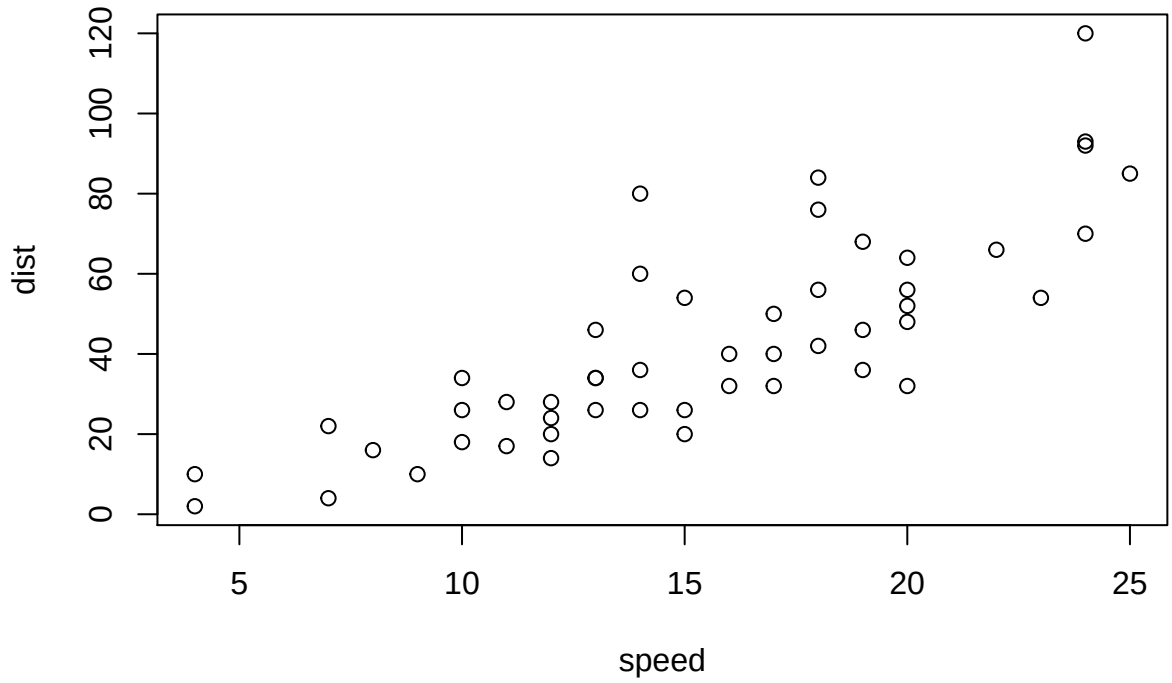
This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
require(dlm, quietly = TRUE)
ll = dlmModPoly(1, dV = 1, dW = 0.01, m0 = 0, C0 = 1)

m3=dlmModTrig(s=276,q=3,dV=1,dW=1)

#Try with 2 and 3 Harmonics

par(mfrow=c(2,2))

#3harm
inits2<-list(c(0,0,0,0,0,0),c(1,1,1,1,1,1),c(1,0,1,0,1,0),c(0,1,0,1,0,1),c(10,0,1,0,1,0),c(1,0,10,0,1,0
#2harm

inits<-list(c(0,0,0,0),c(1,1,1,1),c(1,0,1,0),c(0,1,0,1),c(10,0,1,0),c(1,0,10,0),c(1,10,1,0),c(1,0,1,10)
set.seed(353)
for (i in 1:4){
m1=dlmModTrig(s=276,q=3,dV=1,dW=inits2[[i]],m0=c(0,0,0,0,0,0),C0=diag(c(1,1,1,1,1,1)))
#m1=dlmModTrig(s=276,q=2,dV=0,dW=inits[[i]],m0=c(0,0,0,0),C0=diag(c(1,1,1,1)))
o1 = dlmForecast(m1,1656, sampleNew=1)
dat = data.frame(y = as.numeric(o1$newObs[[1]]))
plot(dat$y,type="l",ylab="y",main=paste("W=",inits2[i]))
abline(v=seq(0,1656,by=276))
color <- rgb(190, 190, 190, alpha=80, maxColorValue=255)
rect(276,-500,552,500,col=color)
rect(828,-500,1104,500,col=color)
rect(1380,-500,1656,500,col=color)
}
```



You can also embed plots, for example:



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