Discrete-time model intro

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R Markdown

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:

```r
## Params
N <- 100
foi_n_params <- 4

# Transitions
transitions <- data.frame(matrix(
  c(
    "I", "T", 0.4,
    "T", "S", 0.5,
    "I", "S", 0.05
    # "I", "D", 0.001,
    # "T", "D", 0.00001
  )
  , ncol = 3, byrow = T))
colnames(transitions) <- c("from", "to", "prob")
transitions$prob<- as.numeric(transitions$prob)

# Data
data <- data.frame(
  "time" = c(10, 20, 35, 60) + 10,
  "state" = c("I", "I", "I", "I"),
  "mean" = c(0.6, 0.5, 0.7, 0.5) - 0.3,
  "sd" = c(0.03, 0.01, 0.01, 0.05)
)
data$lower <- data$mean - 1.96*data$sd
data$upper <- data$mean + 1.96*data$sd


out <- main(transitions, data, N, foi_n_params)
```
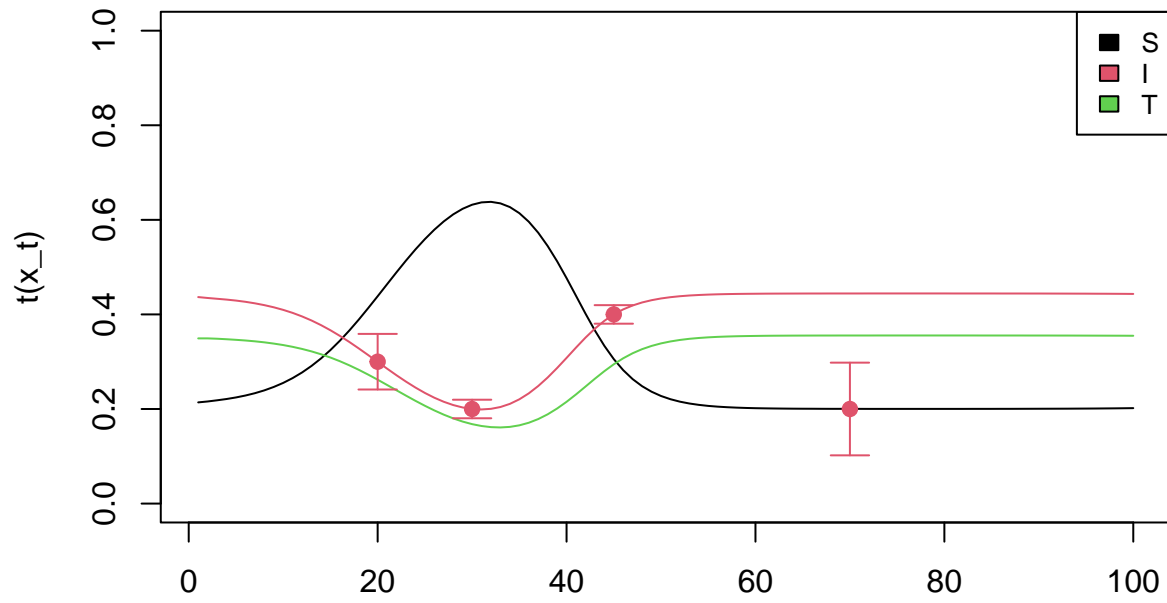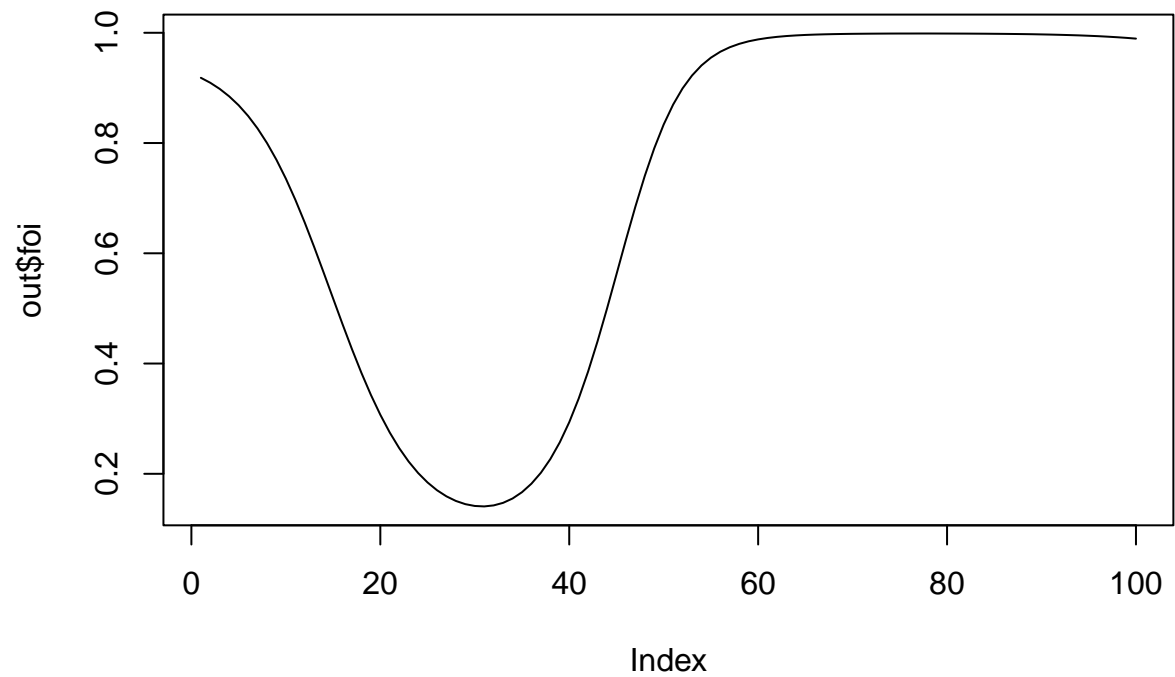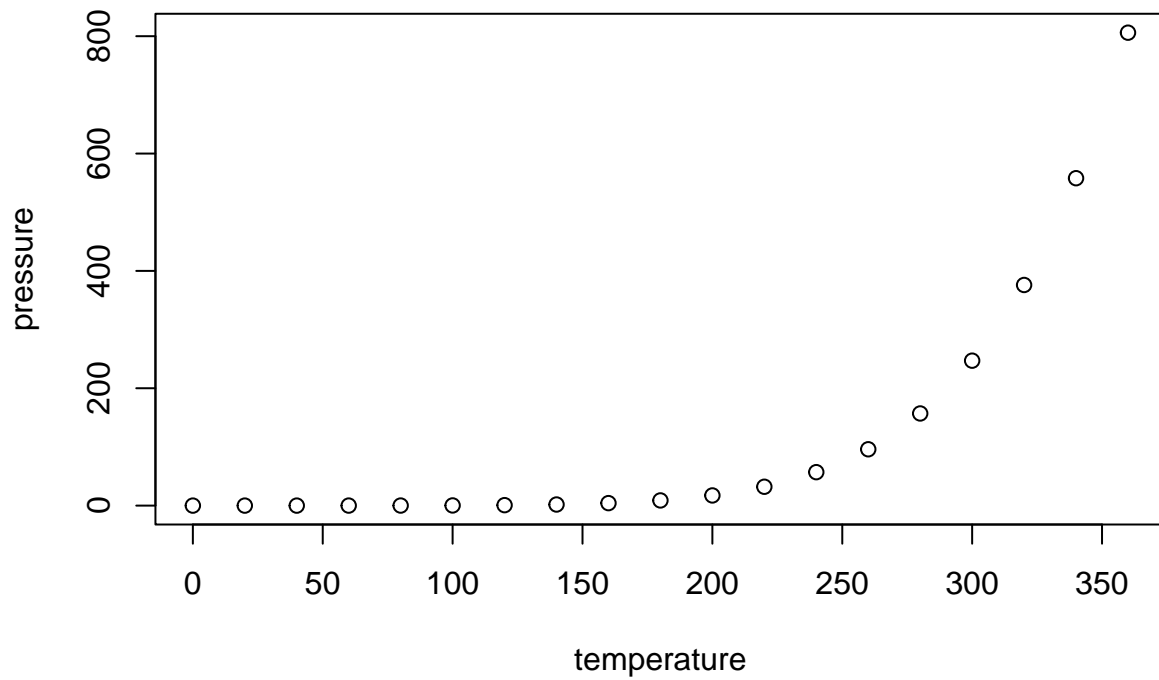
```
plot(out$foi, type = 'l')
```


Including Plots

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.