

11032024_Week3_Lecture

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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:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
##  1st Qu.:12.0    1st Qu.: 26.00
##  Median :15.0    Median : 36.00
##  Mean   :15.4    Mean   : 42.98
##  3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.   :120.00
```

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.

Run R Script Code

```
# Function to print Fibonacci sequence up to n terms
fibonacci <- function(n) {
  # Initialize variables to store the first two terms of the sequence
  a <- 0
  b <- 1

  # Print the first two terms
  cat(a, b, sep = ", ")

  # Generate and print the remaining terms
  for (i in 3:n) {
    c <- a + b
    cat(" ", c)
    # Update variables for the next iteration
    a <- b
    b <- c
  }
}
```

```
# Define the number of terms you want in the sequence  
n <- 10  
# Call the function to print Fibonacci sequence up to n terms  
fibonacci(n)
```

```
## 0, 1, 1, 2, 3, 5, 8, 13, 21, 34
```

```
plot(1:n, fibonacci(n), type="b",  
     main = "Fibonacci Series",  
     xlab = "Index",  
     ylab = "Value")
```

```
## 0, 1, 1, 2, 3, 5, 8, 13, 21, 34
```

