

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Untitled10\* x Untitled11\* x Untitled12\* x Untitled13\* x Untitled14\* x Untitled15\* x Untitled16\* x

```
1 data("iris")
2 str(iris)
3 plot(iris$Sepal.Length, iris$Petal.Length, main = "Scatter plot of Sepal.Length vs.
4 Petal.Length", xlab = "Sepal.Length", ylab = "Petal.Length", col = "skyblue", pch = 16)
5 model <- lm(Petal.Length ~ Sepal.Length, data = iris)
6 abline(model, col = "orange")
7 new_data <- data.frame(Sepal.Length = 5.5)
8 predicted_Petal_Length <- predict(model, newdata = new_data)
9 predicted_Petal_Length
```

9:23 (Top Level) R Script

Console Terminal Background Jobs

```
R 4.3.1 ~ f
> data("iris")
> str(iris)
'data.frame': 150 obs. of 5 variables:
 $ Sepal.Length: num 5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
 $ Sepal.Width : num 3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
 $ Petal.Length: num 1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
 $ Petal.Width : num 0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
 $ Species : Factor w/ 3 levels "setosa","versicolor",...: 1 1 1 1 1 1 1 1 1 1 ...
> plot(iris$Sepal.Length, iris$Petal.Length, main = "Scatter plot of Sepal.Length vs.
+ Petal.Length", xlab = "Sepal.Length", ylab = "Petal.Length", col = "skyblue", pch = 16)
> model <- lm(Petal.Length ~ Sepal.Length, data = iris)
> abline(model, col = "orange")
> new_data <- data.frame(Sepal.Length = 5.5)
> predicted_Petal_Length <- predict(model, newdata = new_data)
> predicted_Petal_Length
1
3.119938
>
```

Environment History Connections Tutorial

Import Dataset 137 MiB

R Global Environment

Data

iris	150 obs. of 5 variables
model	List of 12
new_data	1 obs. of 1 variable

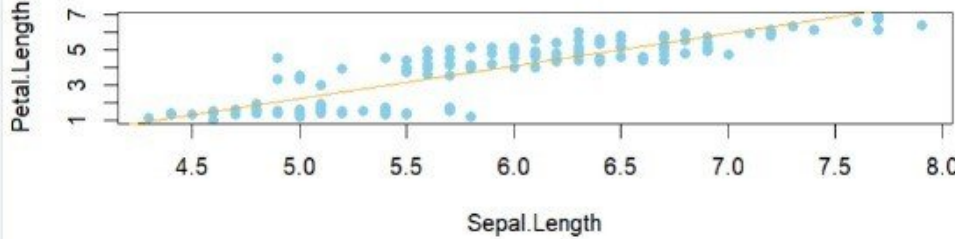
Values

predicted_Petal_Leng...	Named num 3.12
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Files Plots Packages Help Viewer Presentation

Zoom Export Publish

Scatter plot of Sepal.Length vs. Petal.Length



The scatter plot shows the relationship between Sepal.Length (x-axis, ranging from 4.5 to 8.0) and Petal.Length (y-axis, ranging from 1 to 7). The data points are represented by blue circles (pch = 16). A linear regression line is fitted to the data, shown as an orange line. The plot title is "Scatter plot of Sepal.Length vs. Petal.Length".