R_statiscal_project

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2024-12-26

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
tensor <- torch_randn(c(10, 10))

tensor_matrix <- as.array(tensor)

library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.3.3
```

```r
library(reshape2)
```

```
## Warning: package 'reshape2' was built under R version 4.3.3
```

```r
tensor_melt <- melt(tensor_matrix)
colnames(tensor_melt) <- c("X", "Y", "Value")

ggplot(tensor_melt, aes(x = X, y = Y, fill = Value)) +
  geom_tile() +
  scale_fill_gradient2(low = "blue", high = "red", mid = "white", midpoint = 0) +
  theme_minimal() +
  labs(title = "Heatmap of Torch Tensor", x = "X-axis", y = "Y-axis")
```

Heatmap of Torch Tensor