

Module 3: Creating charts, and tab sets in a specified layout of a dashboard

contributed by

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Objective

1. Add/Edit charts on a given layout of a dashboard.
2. Adding graphs and tables in a chart.
3. Creating tabsets in a dashboard.

Data

airquality dataset available in R.

1. Add/Edit charts on a given layout of the dashboard.

- a. **The chart allocates space to display an output, such as tables/plots, etc.**
- b. By default, any chart is defined by Level 3 headers (see Tutorial 2) in markdown.
- c. **Level 3 header:** Type “`### <Chart Name>`” within a column/row of the dashboard.
- d. The chart's name will be displayed as a header (see Figure 1).
- e. The **data-width** and **data-height** parameters allow the charts to be resized in the same manner as columns (see Tutorial 2).
- f. Multiple charts can be placed in a column/row of a dashboard.

2. Adding a plot and a table in a chart

Refer to Module 2 to create a dashboard with row orientation and one row.

A. *Add histogram in a chart* (see Figure 1) using the following steps:

- a. **Step 1:** Add a chart named '`### Histogram`'.
- b. **Step 2:** Specify the width with '`{data-width=2}`' beside the name (as in Tutorial 2).
- c. **Step 3:** Insert a code chunk.
- d. **Step 4:** In the code, write '`hist(airquality$Temp), main = "Histogram of Temperature"`'.
- e. **Step 5:** Click on 'Run Document'.

Note: Refer to [Module 8 Creating a histogram.pdf](#) to read more about creating histograms.

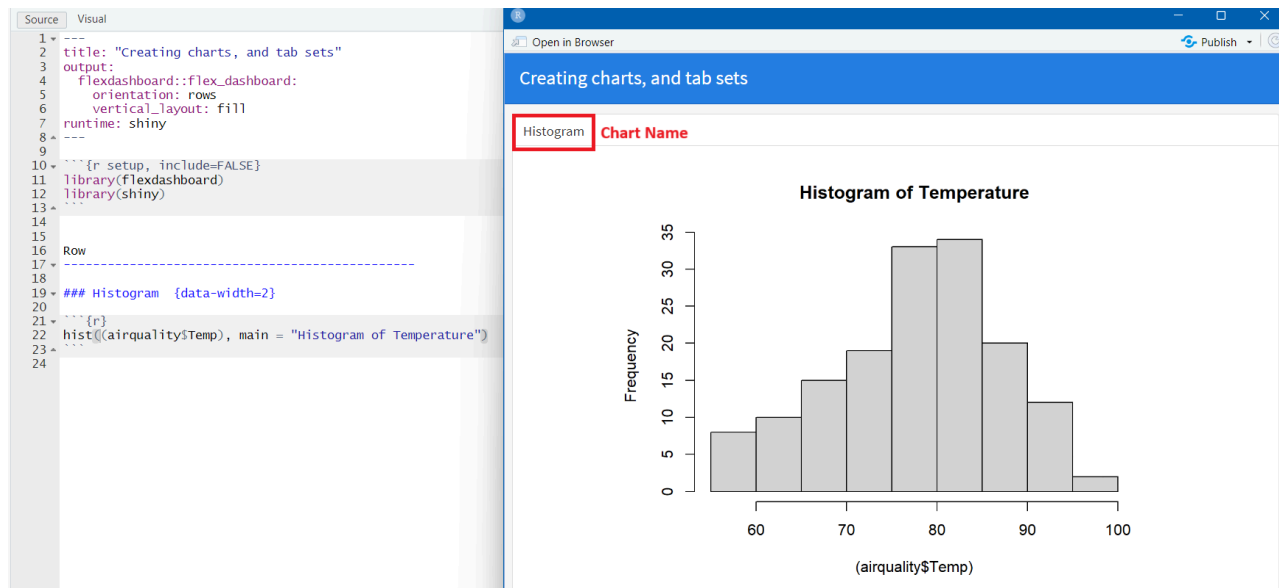


Figure 1: Adding a histogram in a chart

B. Inserting a table in a placeholder (see Figure 3) using the following steps::

- Step 1:** Add a chart named '### Summary Table'.
- Step 2:** Specify the width by '{data-width=3}' beside the name.
- Step 3:** Insert a code chunk.
- Step 4:** In the code chunk, write 'summary(airquality[c("Temp", "Wind", "Ozone")])'. (see Figure 2)
- Step 5:** Save and Run the document.

Note: Refer to [Module 7 Summary statistics of a continuous variable \(fossee.in\)](https://fossee.in) to read more about creating a summary statistics table.



Figure 2: Code for creating two charts

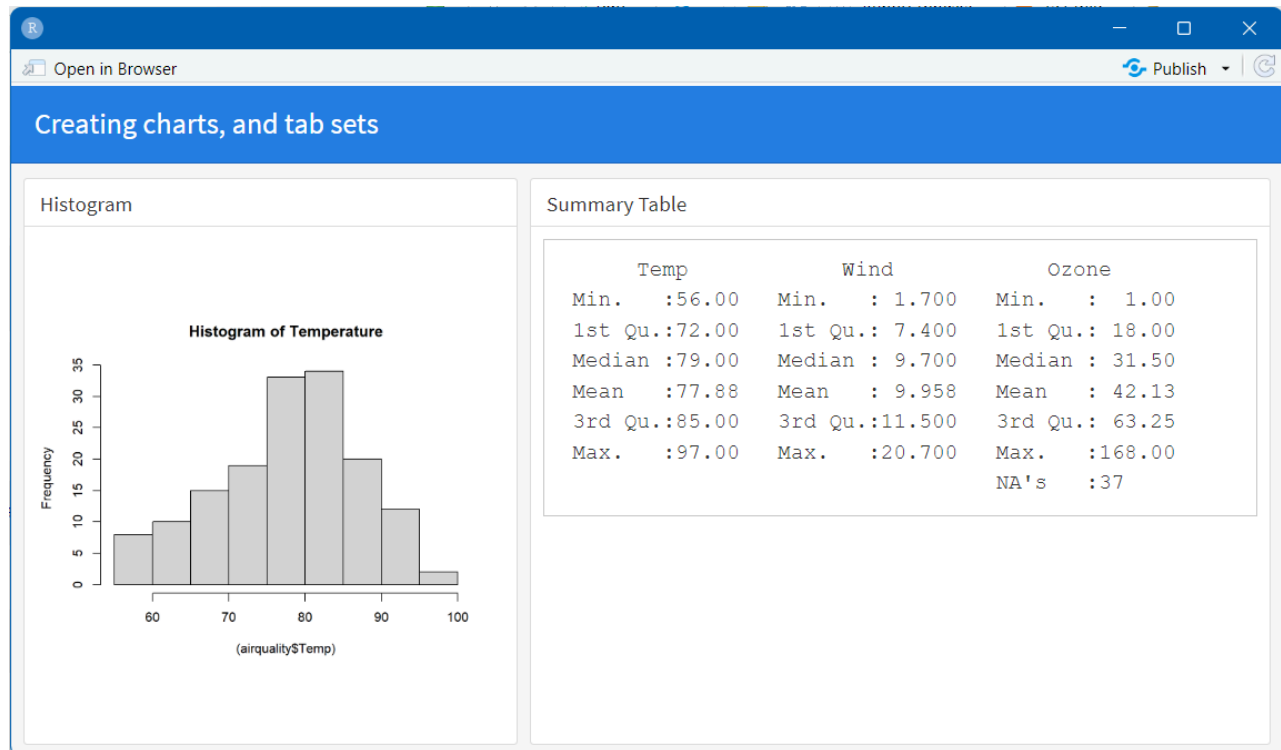


Figure 3: Output of the histogram and the table

3. Creating tab sets

- The flexibility to **create multiple tabs on a single row/column** using tabsets.
- To create one, we must specify a row/column as a tabset using the '**{.tabset}**,' attribute.

A. To create a tabset, follow the steps:

Step 1: Create a dashboard with **two columns** and **column orientation**.

Step 2: Type '**{.tabset}**' beside the first column name.

Step 3: Under the First Column, add two charts named "#Histogram" and "#Box Plot".

Step 4: Specify the width with **{.tabset data-width=2}**.

Step 5:

- In the code chunk of #Histogram, type '**hist((airquality\$Temp), main = "Histogram of Temperature")**'
- In the code chunk of #Box Plot, type '**boxplot(Temp ~ Month, data = airquality, main = "Boxplot of Month vs Temperature")**'

Step 6: Under the Second Column, add a chart named "#Summary Table". Specify **{data-width=3}**.

Step 6: Insert a code chunk and type **"summary(airquality[c("Temp","Wind","Ozone")])"**.

```

Source Visual Outline
1  ---
2  title: "Charts and Tabsets"
3  output:
4    flexdashboard::flex_dashboard:
5      orientation: column
6      vertical_layout: fill
7  runtime: shiny
8  ---
9
10 {r setup, include=FALSE}
11 library(flexdashboard)
12 library(shiny)
13
14
15 First_Column {.tabset}
16 -----
17
18 ### Histogram
19
20 {r}
21 hist((airquality$Temp), main = "Histogram of Temperature")
22
23
24 ### Box Plot
25
26 {r}
27 boxplot(Temp ~ Month, data = airquality, main = "Boxplot of Month vs Temperature")
28
29
30 Second_Column
31 -----
32
33 ### Summary Table
34
35 {r}
36 summary(airquality[c("Temp", "wind", "Ozone")])
37
38

```

Figure 5: Code for creating a tab set from the two charts

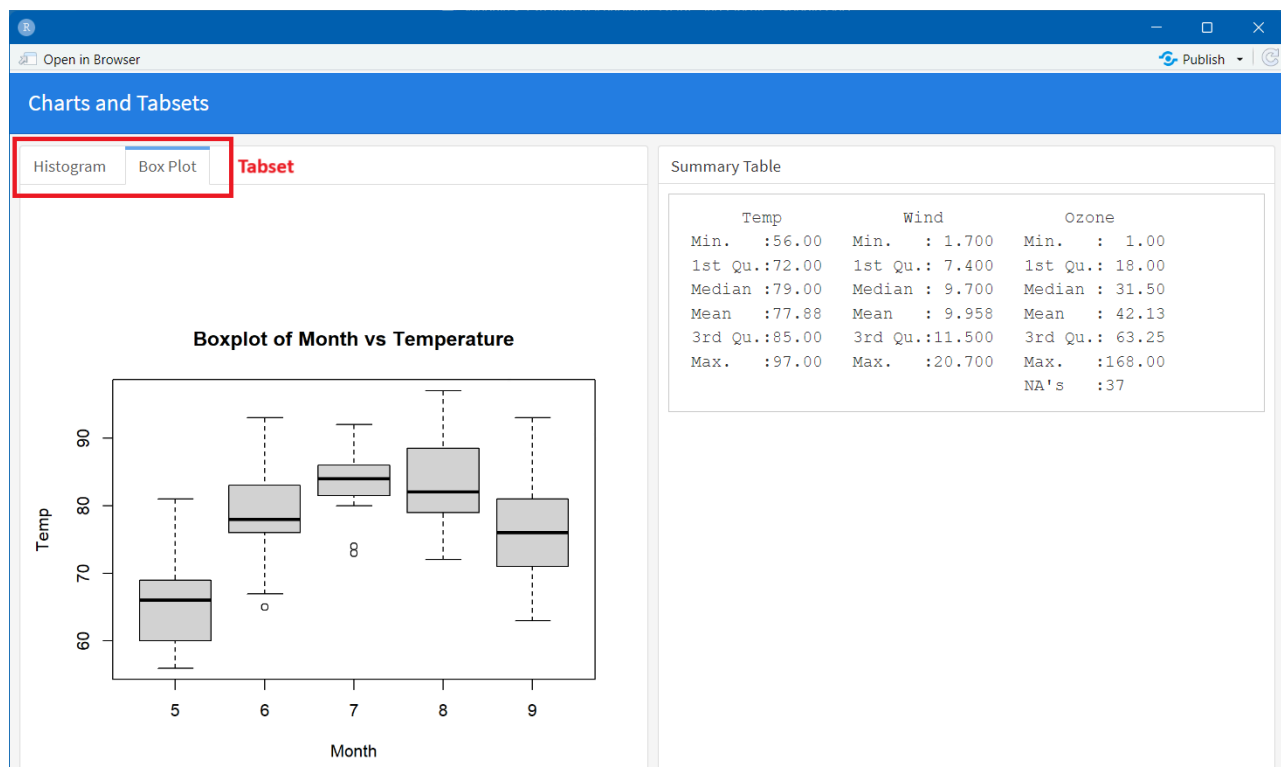


Figure 4: Creating a tab set from the two charts