

# R Markdown Practice

Dr. S P Naik

**Hello World!**

**Heading 2**

**Heading 3**

**Heading 4**

**Heading 5** *italic*  
**Bold**

**Hello World!**

1. List Item 1
2. List Item 2

- Bullet 1
- Bullet 2

You can type whatever you want in here and when you click “knit”, it shall compile and produce the document.

You can also add link to the text. For example, Dr S P Naik profile is available at **Google Scholar**

R Markdown allows the insertion of R code

```
print("Hello world!")
```

```
## [1] "Hello world!"
```

```
# Assignment Operators and Basic Algebra in R  
a = 15  
b = 3  
cat("Sum of a+b =", a + b)
```

```
## Sum of a+b = 18
```

```
cat("Difference of a-b =", a - b)
```

```
## Difference of a-b = 12
```

```
print(paste("Product of a*b =", a * b))
```

```
## [1] "Product of a*b = 45"
```

```
library(glue) #using the glue library  
print(glue("Ratio of a÷b = {a/b}"))
```

```
## Ratio of a÷b = 5
```

```
# Playing with datasets  
data = mtcars  
data
```

```
##          mpg  cyl  disp  hp  drat    wt  qsec vs  am  gear  carb  
## Mazda RX4      21.0   6  160.0  110  3.90  2.620  16.46  0   1    4    4  
## Mazda RX4 Wag  21.0   6  160.0  110  3.90  2.875  17.02  0   1    4    4  
## Datsun 710      22.8   4  108.0   93  3.85  2.320  18.61  1   1    4    1  
## Hornet 4 Drive  21.4   6  258.0  110  3.08  3.215  19.44  1   0    3    1  
## Hornet Sportabout 18.7   8  360.0  175  3.15  3.440  17.02  0   0    3    2  
## Valiant         18.1   6  225.0  105  2.76  3.460  20.22  1   0    3    1  
## Duster 360      14.3   8  360.0  245  3.21  3.570  15.84  0   0    3    4  
## Merc 240D       24.4   4  146.7   62  3.69  3.190  20.00  1   0    4    2  
## Merc 230        22.8   4  140.8   95  3.92  3.150  22.90  1   0    4    2  
## Merc 280        19.2   6  167.6  123  3.92  3.440  18.30  1   0    4    4  
## Merc 280C       17.8   6  167.6  123  3.92  3.440  18.90  1   0    4    4  
## Merc 450SE      16.4   8  275.8  180  3.07  4.070  17.40  0   0    3    3  
## Merc 450SL      17.3   8  275.8  180  3.07  3.730  17.60  0   0    3    3  
## Merc 450SLC     15.2   8  275.8  180  3.07  3.780  18.00  0   0    3    3  
## Cadillac Fleetwood 10.4   8  472.0  205  2.93  5.250  17.98  0   0    3    4  
## Lincoln Continental 10.4   8  460.0  215  3.00  5.424  17.82  0   0    3    4  
## Chrysler Imperial 14.7   8  440.0  230  3.23  5.345  17.42  0   0    3    4  
## Fiat 128        32.4   4   78.7   66  4.08  2.200  19.47  1   1    4    1  
## Honda Civic     30.4   4   75.7   52  4.93  1.615  18.52  1   1    4    2  
## Toyota Corolla  33.9   4   71.1   65  4.22  1.835  19.90  1   1    4    1  
## Toyota Corona   21.5   4  120.1   97  3.70  2.465  20.01  1   0    3    1  
## Dodge Challenger 15.5   8  318.0  150  2.76  3.520  16.87  0   0    3    2  
## AMC Javelin     15.2   8  304.0  150  3.15  3.435  17.30  0   0    3    2  
## Camaro Z28      13.3   8  350.0  245  3.73  3.840  15.41  0   0    3    4  
## Pontiac Firebird 19.2   8  400.0  175  3.08  3.845  17.05  0   0    3    2  
## Fiat X1-9       27.3   4   79.0   66  4.08  1.935  18.90  1   1    4    1  
## Porsche 914-2   26.0   4  120.3   91  4.43  2.140  16.70  0   1    5    2  
## Lotus Europa    30.4   4   95.1  113  3.77  1.513  16.90  1   1    5    2  
## Ford Pantera L   15.8   8  351.0  264  4.22  3.170  14.50  0   1    5    4  
## Ferrari Dino     19.7   6  145.0  175  3.62  2.770  15.50  0   1    5    6  
## Maserati Bora    15.0   8  301.0  335  3.54  3.570  14.60  0   1    5    8  
## Volvo 142E      21.4   4  121.0  109  4.11  2.780  18.60  1   1    4    2
```

```
## For better display

### Option 1
library(kableExtra)

#### For html kable(mtcars,caption='Table 1: Motor Car Road Tests') %>%
#### kable_styling(bootstrap_options = c('stripped','hover','condensed'))

### For pdf kable(mtcars,booktabs=TRUE, caption = 'Table 1: Motor Car Road
### Tests') %>% kable_styling(latex_options = 'hold_position')

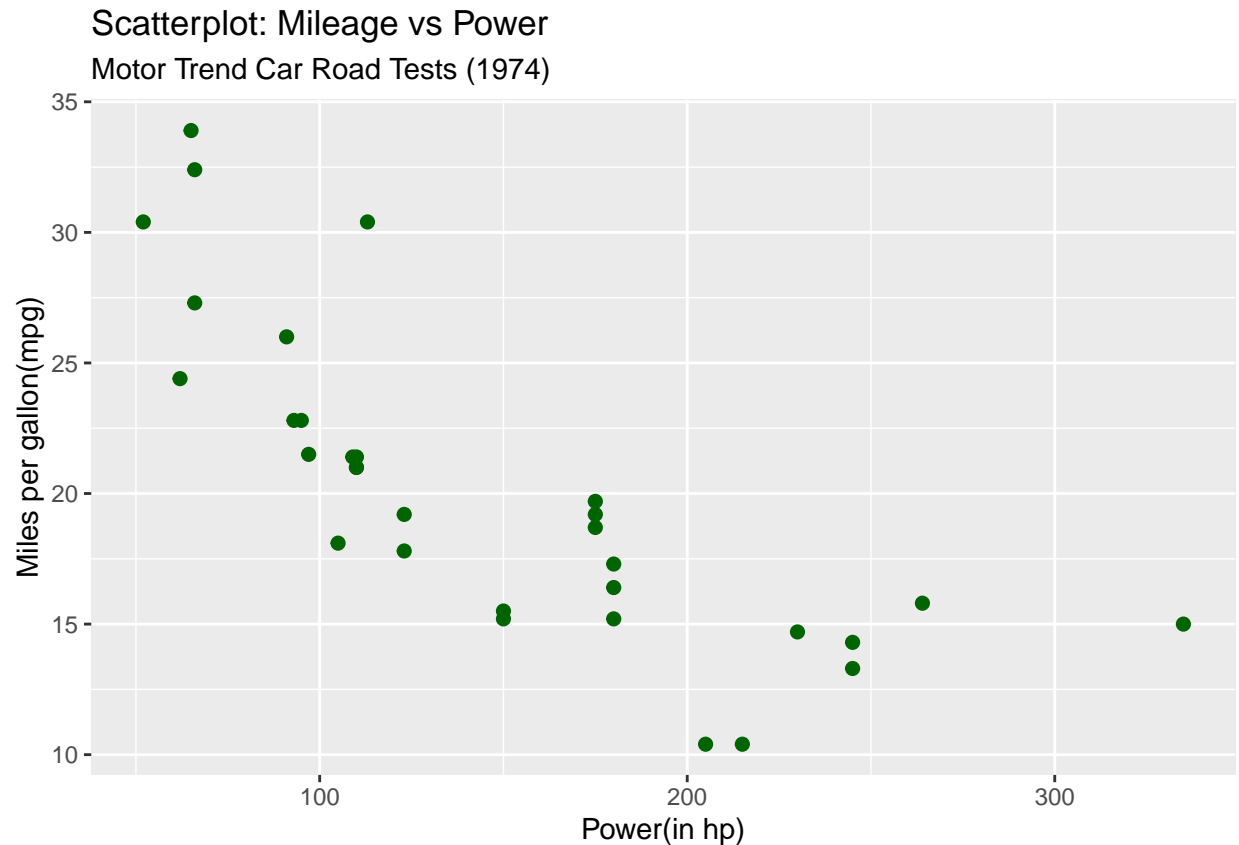
library(gt)
data %>%
  gt() %>%
  tab_header(title = "Table 1: Motor Car Road Tests", subtitle = "A dataset of 32 cars
  ↪ from 1974")
```

Now let's move on to the next chunk of code.

## Plots with R for dataset mtcars

```
library(ggplot2)

# Scatterplot for Mileage vs Weight
ggplot(data, aes(x = hp, y = mpg)) + geom_point(col = "darkgreen", pch = 19, size = 2) +
  ggtitle("Scatterplot: Mileage vs Power", subtitle = "Motor Trend Car Road Tests
  ↪ (1974)") +
  xlab("Power(in hp)") + ylab("Miles per gallon(mpg)")
```



Note: Session Info

```
sessionInfo()
```

```
## R version 4.5.1 (2025-06-13 ucrt)
## Platform: x86_64-w64-mingw32/x64
## Running under: Windows 11 x64 (build 26100)
##
## Matrix products: default
##   LAPACK version 3.12.1
##
## locale:
## [1] LC_COLLATE=English_India.utf8  LC_CTYPE=English_India.utf8
## [3] LC_MONETARY=English_India.utf8 LC_NUMERIC=C
## [5] LC_TIME=English_India.utf8
##
## time zone: Asia/Calcutta
## tzcode source: internal
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods    base
##
## other attached packages:
## [1] ggplot2_4.0.0    gt_1.1.0          kableExtra_1.4.0 glue_1.8.0
##
## loaded via a namespace (and not attached):
```

## [1]	gtable_0.3.6	dplyr_1.1.4	compiler_4.5.1	crayon_1.5.3
## [5]	tidyselect_1.2.1	xml2_1.4.0	stringr_1.5.2	systemfonts_1.3.1
## [9]	scales_1.4.0	textshaping_1.0.3	yaml_2.3.10	fastmap_1.2.0
## [13]	R6_2.6.1	labeling_0.4.3	generics_0.1.4	knitr_1.50
## [17]	tibble_3.3.0	svglite_2.2.1	pillar_1.11.1	RColorBrewer_1.1-3
## [21]	rlang_1.1.6	stringi_1.8.7	xfun_0.53	fs_1.6.6
## [25]	S7_0.2.0	viridisLite_0.4.2	cli_3.6.5	withr_3.0.2
## [29]	magrittr_2.0.4	formatR_1.14	digest_0.6.37	grid_4.5.1
## [33]	rstudioapi_0.17.1	lifecycle_1.0.4	vctrs_0.6.5	evaluate_1.0.5
## [37]	farver_2.1.2	rmarkdown_2.30	tools_4.5.1	pkgconfig_2.0.3
## [41]	htmltools_0.5.8.1			

Table 1: Motor Car Road Tests  
A dataset of 32 cars from 1974

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2
22.8	4	140.8	95	3.92	3.150	22.90	1	0	4	2
19.2	6	167.6	123	3.92	3.440	18.30	1	0	4	4
17.8	6	167.6	123	3.92	3.440	18.90	1	0	4	4
16.4	8	275.8	180	3.07	4.070	17.40	0	0	3	3
17.3	8	275.8	180	3.07	3.730	17.60	0	0	3	3
15.2	8	275.8	180	3.07	3.780	18.00	0	0	3	3
10.4	8	472.0	205	2.93	5.250	17.98	0	0	3	4
10.4	8	460.0	215	3.00	5.424	17.82	0	0	3	4
14.7	8	440.0	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.200	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.90	1	1	4	1
21.5	4	120.1	97	3.70	2.465	20.01	1	0	3	1
15.5	8	318.0	150	2.76	3.520	16.87	0	0	3	2
15.2	8	304.0	150	3.15	3.435	17.30	0	0	3	2
13.3	8	350.0	245	3.73	3.840	15.41	0	0	3	4
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27.3	4	79.0	66	4.08	1.935	18.90	1	1	4	1
26.0	4	120.3	91	4.43	2.140	16.70	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.90	1	1	5	2
15.8	8	351.0	264	4.22	3.170	14.50	0	1	5	4
19.7	6	145.0	175	3.62	2.770	15.50	0	1	5	6
15.0	8	301.0	335	3.54	3.570	14.60	0	1	5	8
21.4	4	121.0	109	4.11	2.780	18.60	1	1	4	2