Virginia Tech Beamer Presentation
Some other text

Preston Childress

October 12, 2022

VIRGINIA TECH

General Stuff

- ▶ You can make lists
    - ▶ Sub-items are indented
        - ▶ So are sub-sub-items
- ▶ And you can do in-line LaTeX: $e^{i\pi} + 1 = 0$
- ▶ Or in-line R syntax: `mean(mtcars$mpg)`
- ▶ LaTeX blocks are also supported:

$$\sum_{i=1}^{n} \phi_i \frac{\mathbf{u}_i^\mathsf{T} \mathbf{b}}{\sigma_i} \mathbf{v}_i$$

V̄T VIRGINIA
TECH.

Code Example

▶ Code outputs with normal font size can use up vertical space quickly

```
# This output is normalsize and takes up space
head(mtcars)
```

```
                     mpg cyl disp  hp drat    wt  qsec vs am gear carb
Mazda RX4           21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
Mazda RX4 Wag       21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
Datsun 710          22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
Hornet 4 Drive      21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
Hornet Sportabout   18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
Valiant             18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

VIRGINIA TECH.

Smaller Code

▶ The `size` parameter can be used to change code and output size

▶ It accepts standard LaTeX sizes:

  ▶ Huge > huge > LARGE > Large > large > normalsize > small > footnotesize > scriptsize > tiny

```
# This output is footnotesize and takes up less space
head(mtcars)
```
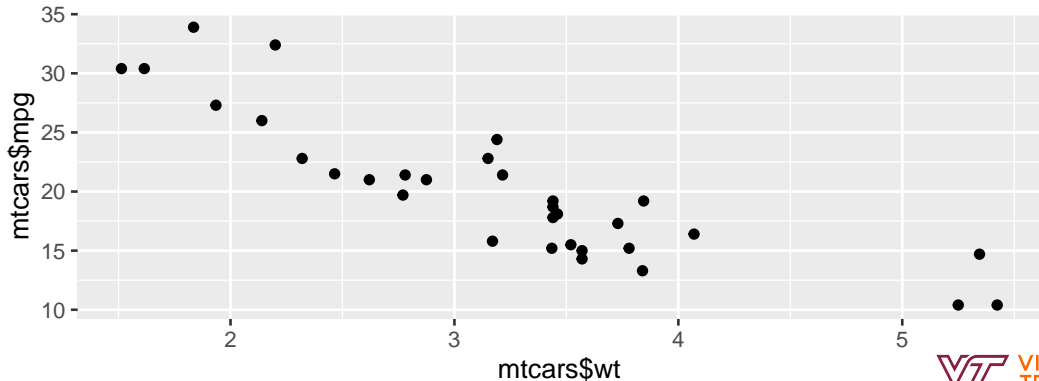
```
                     mpg cyl disp  hp drat    wt  qsec vs am gear carb
Mazda RX4           21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
Mazda RX4 Wag       21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
Datsun 710          22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
Hornet 4 Drive      21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
Hornet Sportabout   18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
Valiant             18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

VIRGINIA TECH.

Plot Example

▶ Use `fig.width` / `fig.height` to scale plots

```
# Code with {r fig.width = 6, fig.height = 2.25}
qplot(x = mtcars$wt, y = mtcars$mpg)
```


VIRGINIA TECH.

Handling Overflow I

▶ Sometimes code output will be too long for a single slide

▶ Adding {.allowframebreaks} to the title of a slide lets it overflow onto a second slide

▶ For this slide the header is ## Handling Overflow {.allowframebreaks}

```
# Intentionally long output
head(mtcars, 18)
```

	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

VIRGINIA TECH.

Handling Overflow II

```
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
```

▶ Output is continued to the second slide automatically

▶ The slide title automatically incremented

▶ The navigation dot does not advance

VIRGINIA
TECH.

About References

▶ The References slide is created from a BibTeX (`.bib`) file declared at the top of this file

▶ Citation style is defined from a `.csl` file also declared at the top of this file

▶ Use `nocite` to include a citation in the bibliography without referencing it directly

▶ References can be cited in the presentation with `@referenceName` eg `@ggplotBg`: Nagraj (2016)

▶ Zotero is a good tool for building citation files: https://zbib.org/

▶ There are 1400+ citation style files available: https://github.com/citation-style-language/styles

▶ `{.allowframebreaks}` can be useful if there are many citations

VIRGINIA TECH.

References

"Get, Set, and Modify the Active Theme - Theme_get." n.d. Accessed December 13, 2021. https://ggplot2.tidyverse.org/reference/theme_get.html.

Grolemund, Garrett, J. J. Allaire. n.d. *R Markdown: The Definitive Guide.* Accessed December 13, 2021. https://bookdown.org/yihui/rmarkdown/.

Kaplan, Jacob. n.d. *R Markdown Crime by the Numbers: A Criminologist's Guide to R.* Accessed December 13, 2021. https://crimebythenumbers.com.

Nagraj, V. P. 2016. "Transparent Ggplot2 Plot Backgrounds." https://www.nagraj.net/notes/transparent-background-with-ggplot2/.

"R - Code Chunk Font Size in Rmarkdown with Knitr and Latex - Stack Overflow." n.d. Accessed December 13, 2021. https://stackoverflow.com/questions/25646333/code-chunk-font-size-in-rmarkdown-with-knitr-and-latex/46526740#46526740.

VIRGINIA
TECH.