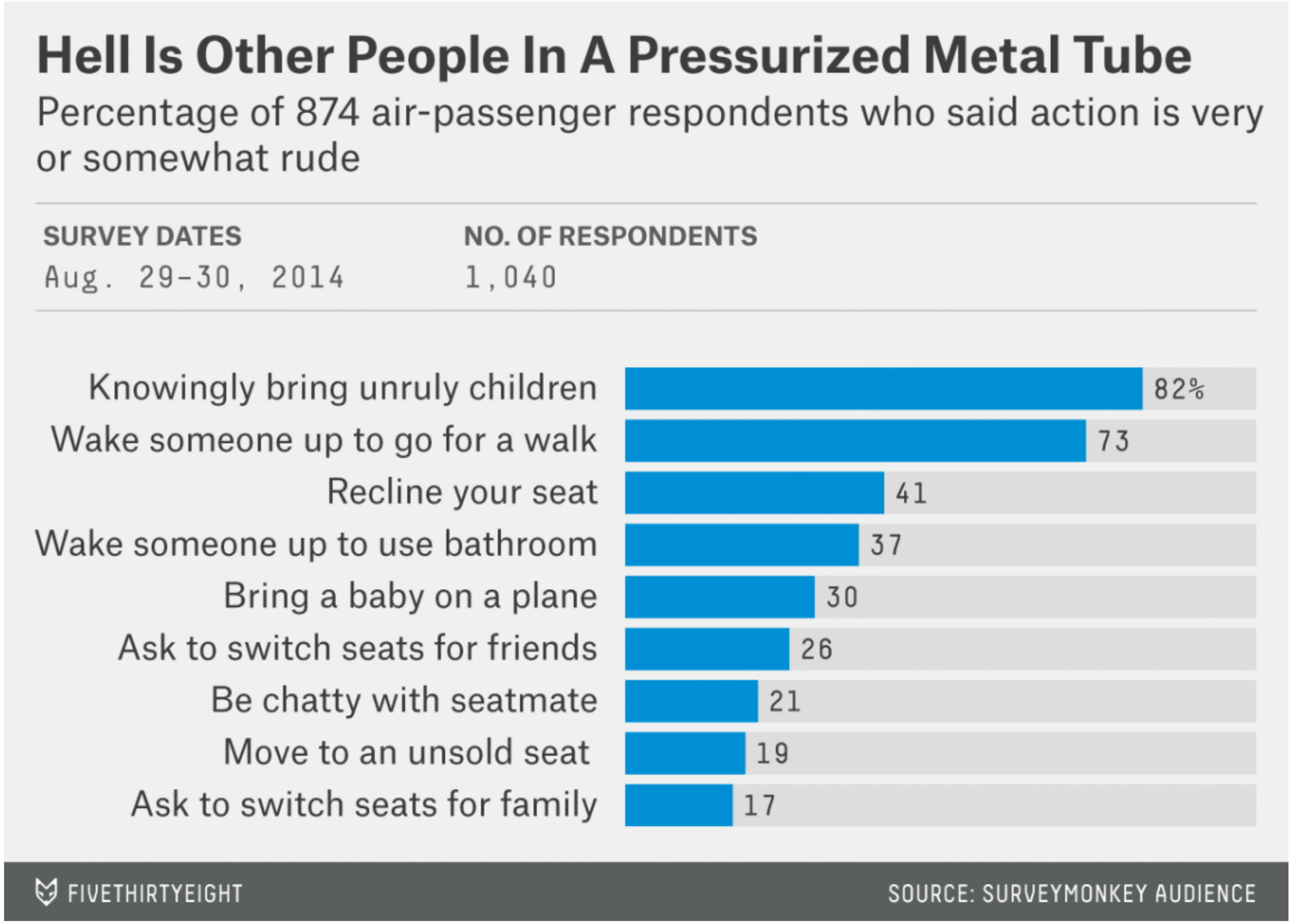
Case study introduction

CATEGORICAL DATA IN THE TIDYVERSE

Emily Robinson
Data Scientist


Hell Is Other People In A Pressurized Metal Tube
Percentage of 874 air-passenger respondents who said action is very or somewhat rude
SURVEY DATES
Aug. 29–30, 2014
NO. OF RESPONDENTS
1,040
Knowingly bring unruly children 82%
Wake someone up to go for a walk 73
Recline your seat 41
Wake someone up to use bathroom 37
Bring a baby on a plane 30
Ask to switch seats for friends 26
Be chatty with seatmate 21
Move to an unsold seat 19
Ask to switch seats for family 17
FIVETHIRTYEIGHT
SOURCE: SURVEYMONKEY AUDIENCE

Original dataset

```
# A tibble: 1,040 x 27
  RespondentID travel_amount   do_recline
         <dbl> <chr>           <chr>
1  3436139758. Once a year or… NA
2  3434278696. Once a year or… About half t…
3  3434275578. Once a year or… Usually
4  3434268208. Once a year or… Always
# ... with 24 more variables: height <chr>,
#   children_sub_18 <chr>,
#   middle_arm_rest_three <chr>,
#   middle_arm_rest_two <chr>,
#   window_shade_control <chr>,
#   rude_move_seats <chr>, rude_talk <chr>,
#   times_get_up <chr>,
#   recliner_obligation <chr>,
#   rude_recline <chr>,
#   eliminate_recline <chr>,
#   rude_switch_seats_friend <chr>,
```

Tools recap

```
> wide_data
# A tibble: 2 x 3
  favorite_fruit favorite_vegetable disliked_dessert
  <chr>          <chr>              <chr>
1 apple          carrot             cookie
2 orange         cauliflower        cake
```

```
wide_data %>%
   mutate_if(is.character, as.factor)
```

```
# A tibble: 2 x 3
  favorite_fruit favorite_vegetable disliked_dessert
  <fct>          <fct>              <fct>
1 apple          carrot             cookie
2 orange         cauliflower        cake
```

tidyr gather()

```
wide_data %>%
   gather(column, value)
```

```
# A tibble: 6 x 2
  column             value
  <chr>              <chr>
1 favorite_fruit     apple
2 favorite_fruit     orange
3 favorite_vegetable carrot
4 favorite_vegetable cauliflower
5 disliked_dessert   cookie
6 disliked_dessert   cake
```

Select helper functions

```
wide_data %>%
    select(contains("favorite"))
```

```
# A tibble: 2 x 2
  favorite_fruit favorite_vegetable
  <chr>          <chr>
1 apple          carrot
2 orange         cauliflower
```

Let's practice!

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Data preparation and regex

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Data Scientist

datacamp

Handling long names

```
gathered_data %>%
   distinct(response_var)
```

```
# A tibble: 9 x 1
  response_var
  <chr>
1 Is it rude to move to an unsold seat on a
  plane?
2 Generally speaking, is it rude to say
  more than a few words to the stranger…
3 Is it rude to recline your seat on a plane?
4 Is it rude to ask someone to switch
  seats with you in order to be closer to…
5 Is it rude to ask someone to switch
  seats with you in order to be closer to…
6 Is it rude to wake a passenger up if
  you are trying to go to the bathroom?
7 Is it rude to wake a passenger up if
  you are trying to walk around?
8 In general, is it rude to bring a
  baby on a plane?
9 In general, is it rude to knowingly
```

Regex

```
str_detect("happy", ".")
```

```
[1] TRUE
```

```
str_detect("happy", "h.")
```

```
[1] TRUE
```

```
str_detect("happy", "y.")
```

```
[1] FALSE
```

Regex

```
string <- "Statistics is the best"
```

```
str_remove(string, ".*the ")
```

```
[1] "best"
```

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Recreating the plot

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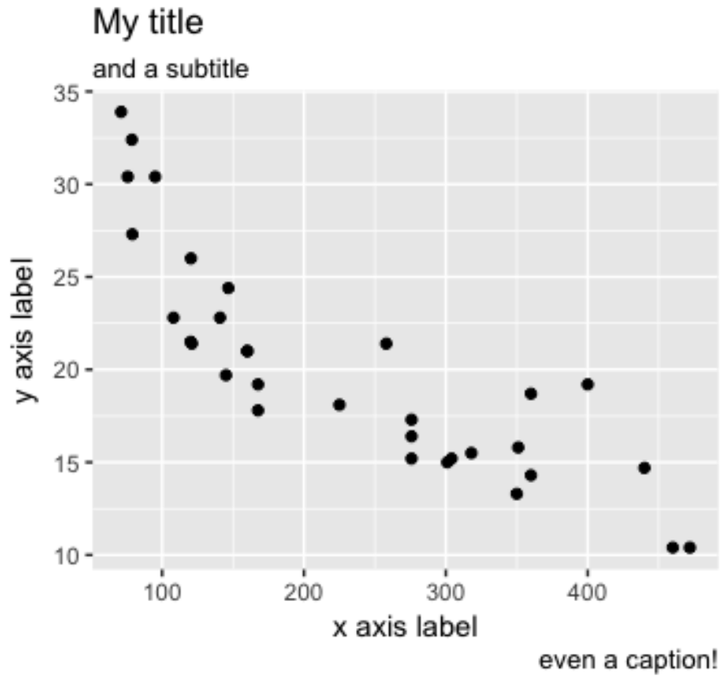
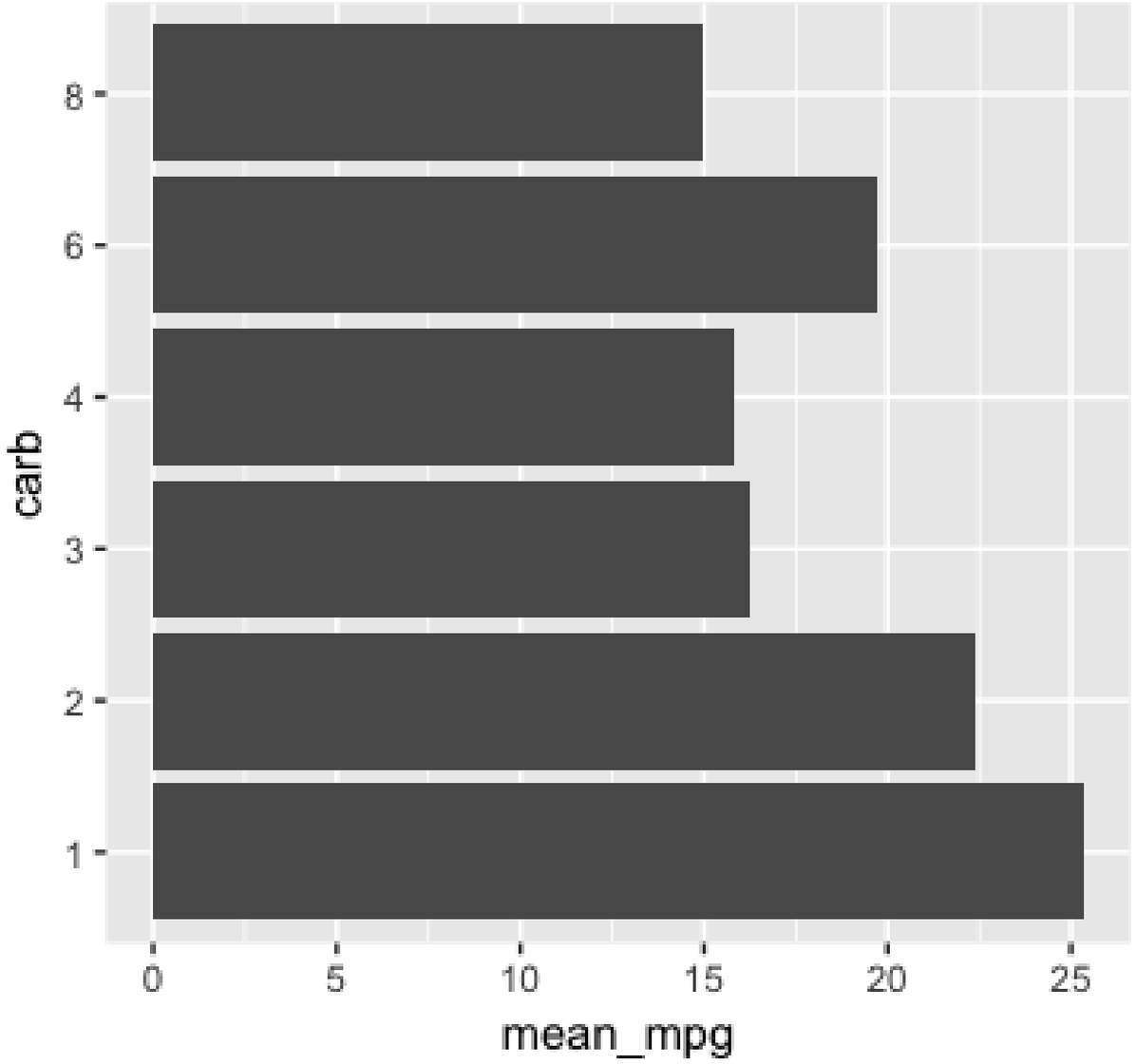
Labs

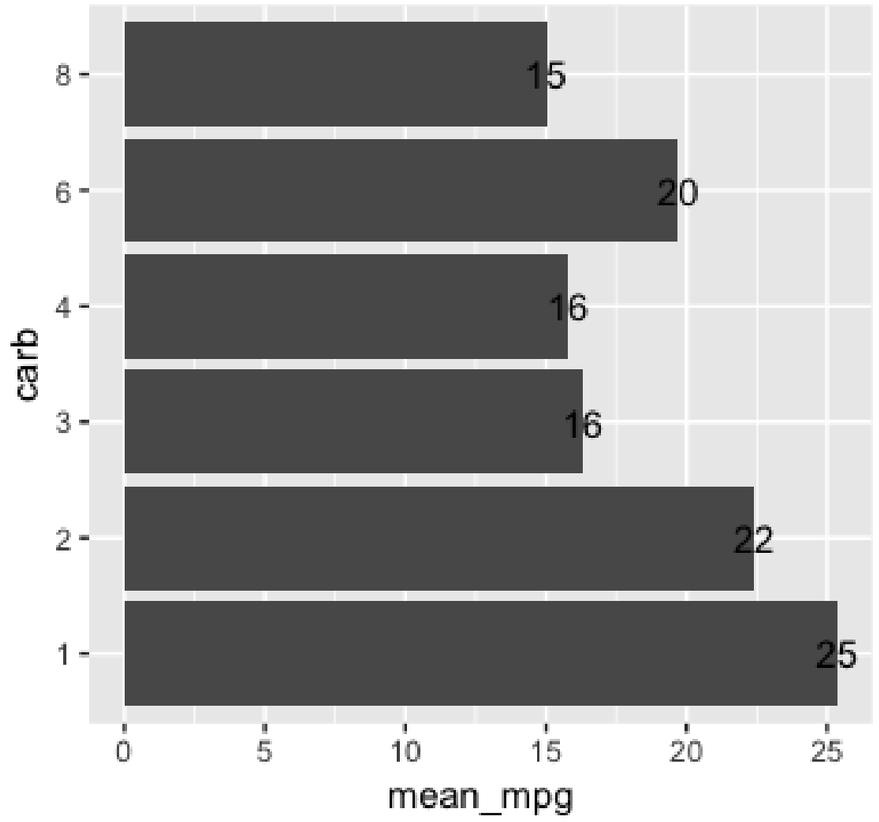
```
ggplot(mtcars, aes(disp, mpg)) + geom_point() +
  labs(x = "x axis label", y = "y axis label", title = "My title",
       subtitle = "and a subtitle", caption = "even a caption!")
```




carb
8
6
4
3
2
1
0
5
10
15
20
25
mean_mpg

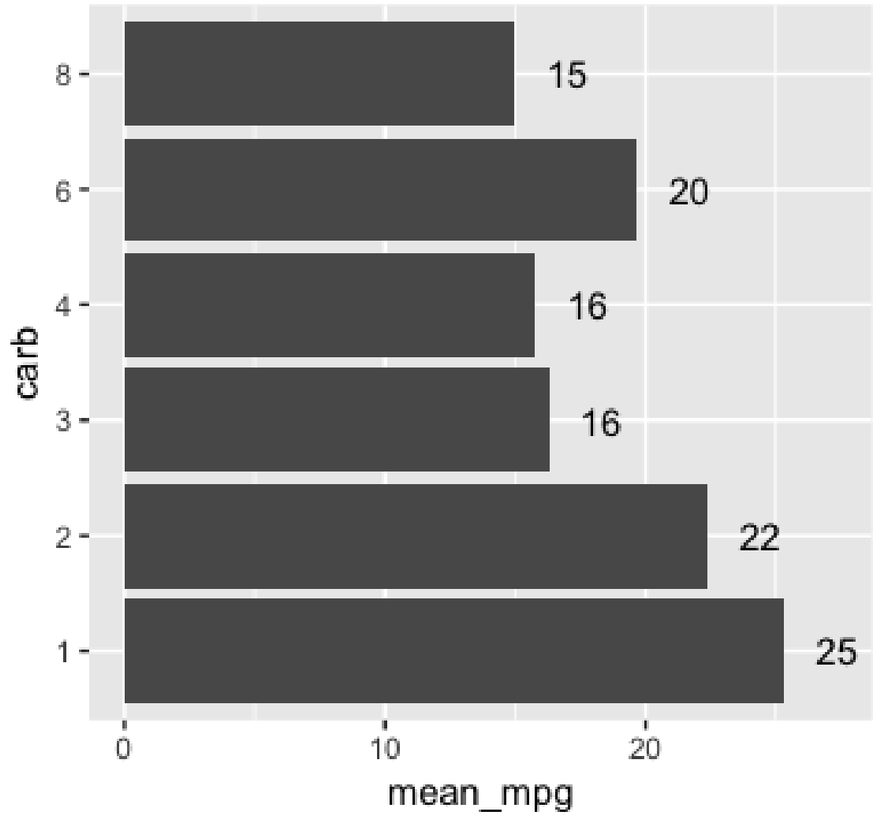
Geom_text

```
initial_plot + geom_text(aes(label = round(mean_mpg)))
```



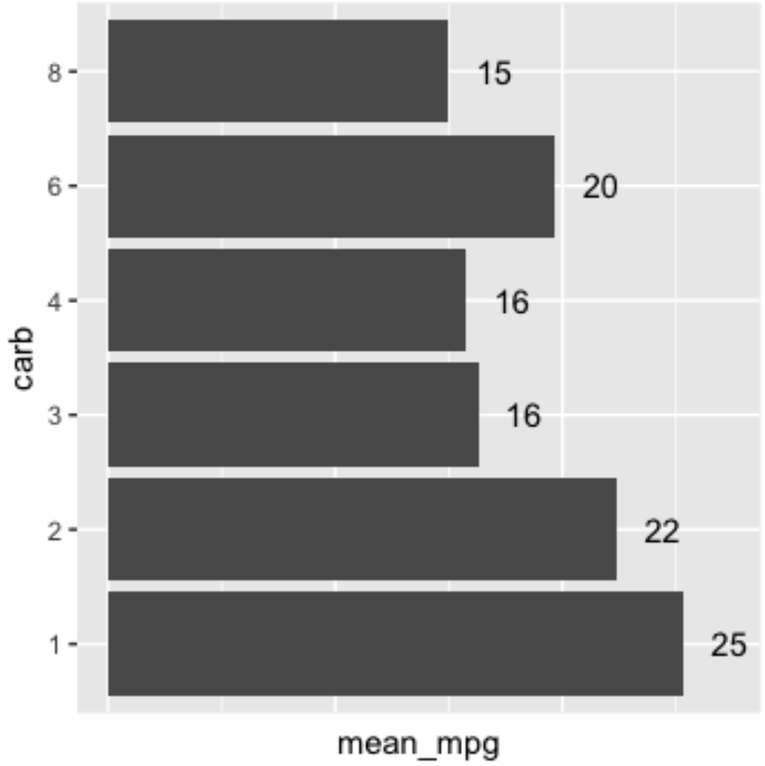
Moving text

```
initial_plot +
  geom_text(aes(label = round(mean_mpg), y = mean_mpg + 2))
```



Theme

```
initial_plot +
  geom_text(aes(label = round(mean_mpg), y = mean_mpg + 2)) +
  theme(axis.text.x = element_blank(), axis.ticks.x = element_blank())
```



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Final thoughts

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What you've learned

- `forcats` functions:
  - `fct_reorder()`, `fct_collapse()`, `fct_other()`, `fct_relevel()`, `fct_rev()`, & `fct_recode()`
- `tidyverse` functions:
  - `case_when()`, `mutate_if()`, `gather()`, & `str_remove()`
- `ggplot2` tricks:
  - `scales::percent_format()`, `labs()`, & `axis.text.x`
- Case study

Congratulations!

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