

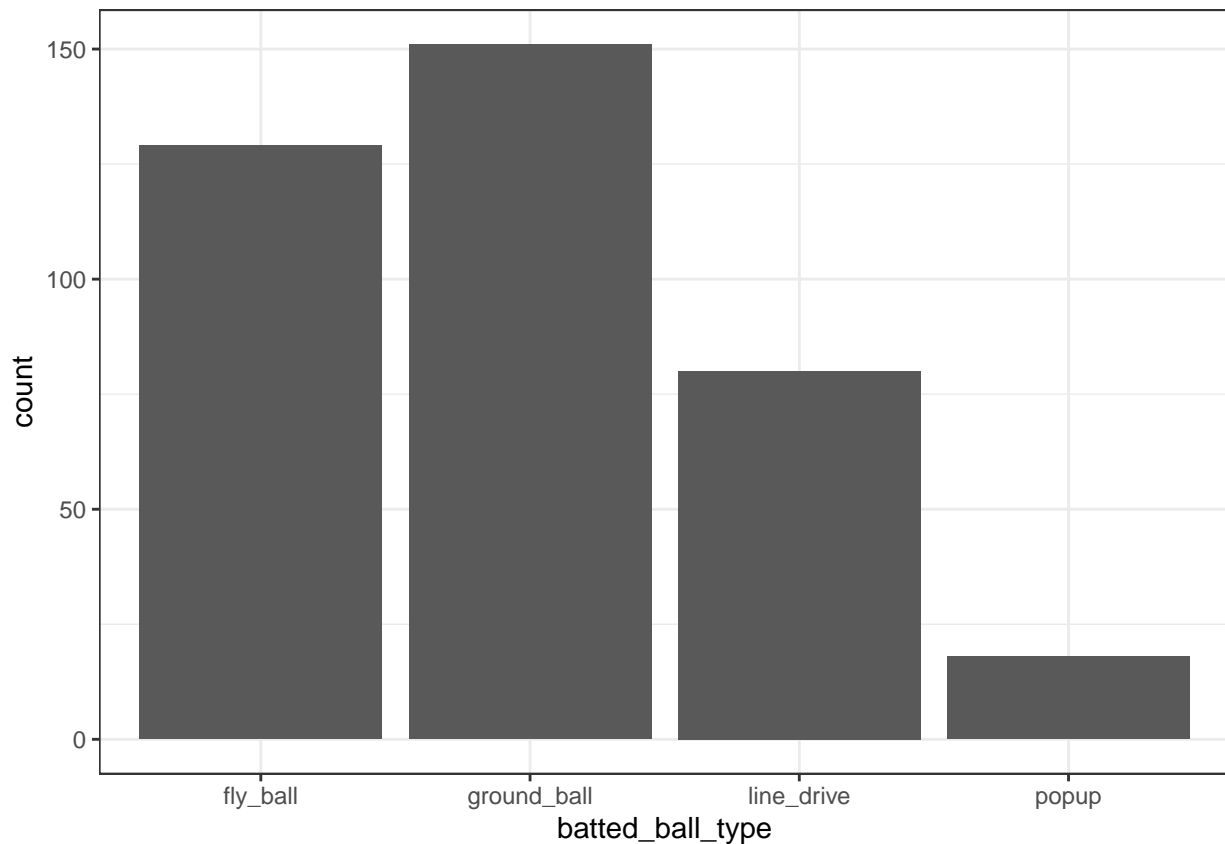
Visualizing 1D categorical and continuous variables

2023-06-08

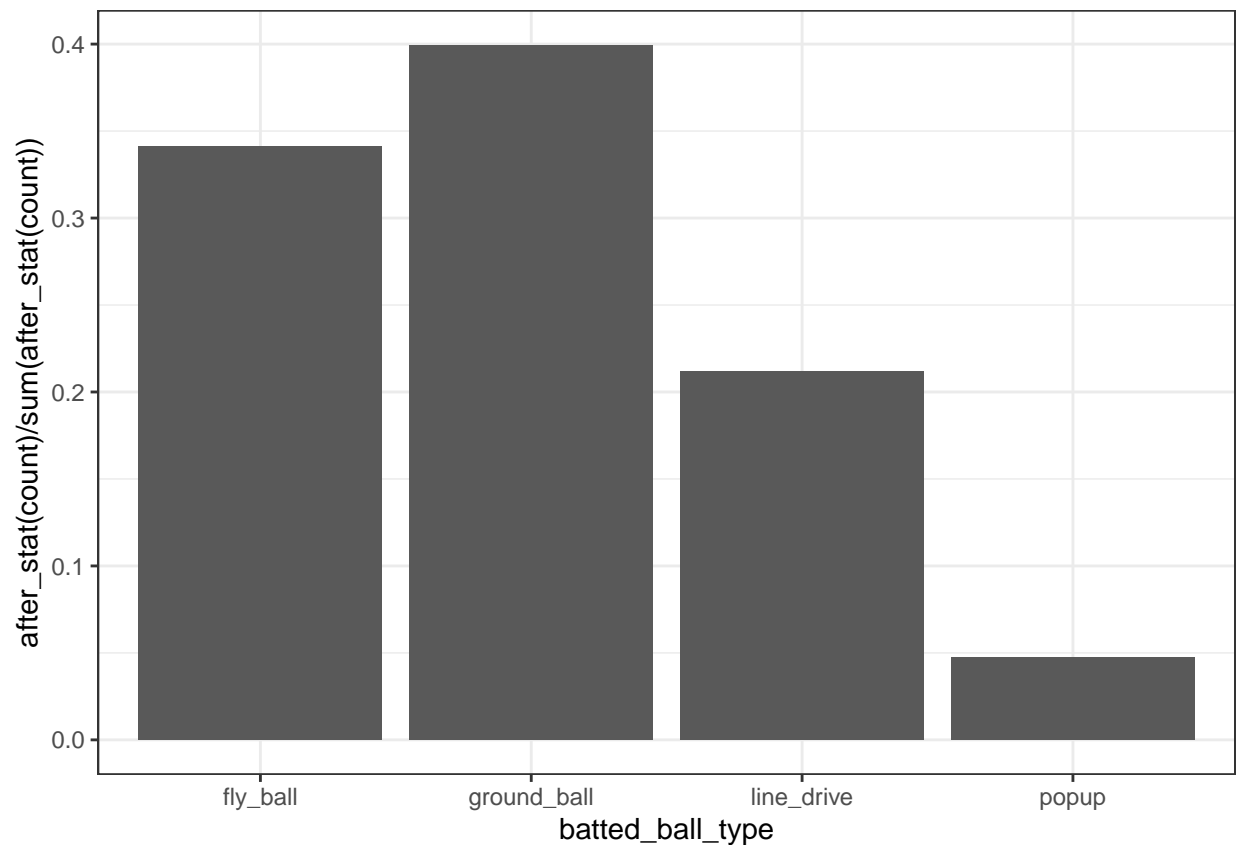
```
ohtani_batted_balls <-  
read_csv("https://shorturl.at/mnwL1")
```

Describing 1D Categorical data

```
ohtani_batted_balls %>%  
  ggplot(aes(batted_ball_type))+  
  geom_bar()+  
  theme_bw()
```



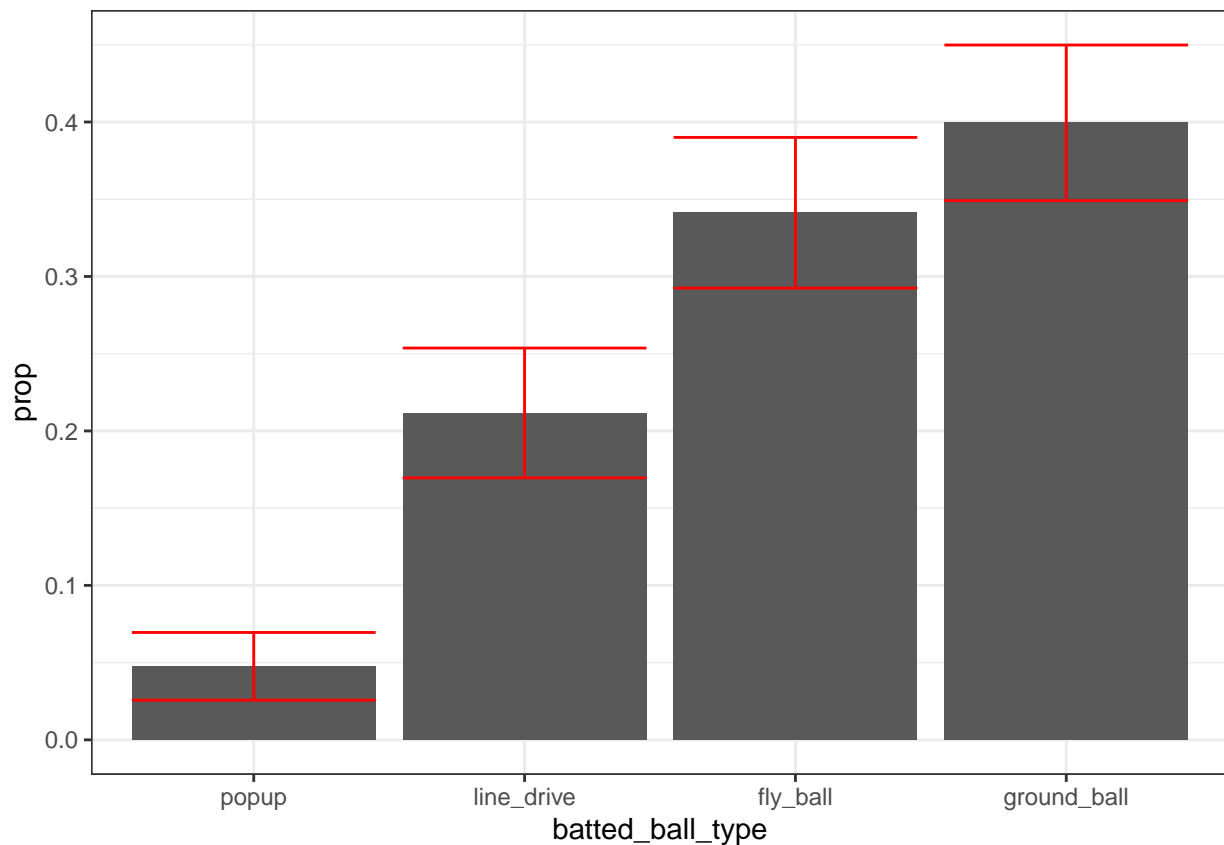
```
ohtani_batted_balls %>%  
  ggplot(aes(batted_ball_type))+  
  geom_bar(aes(y = after_stat(count)/sum(after_stat(count))))+  
  theme_bw()
```



```

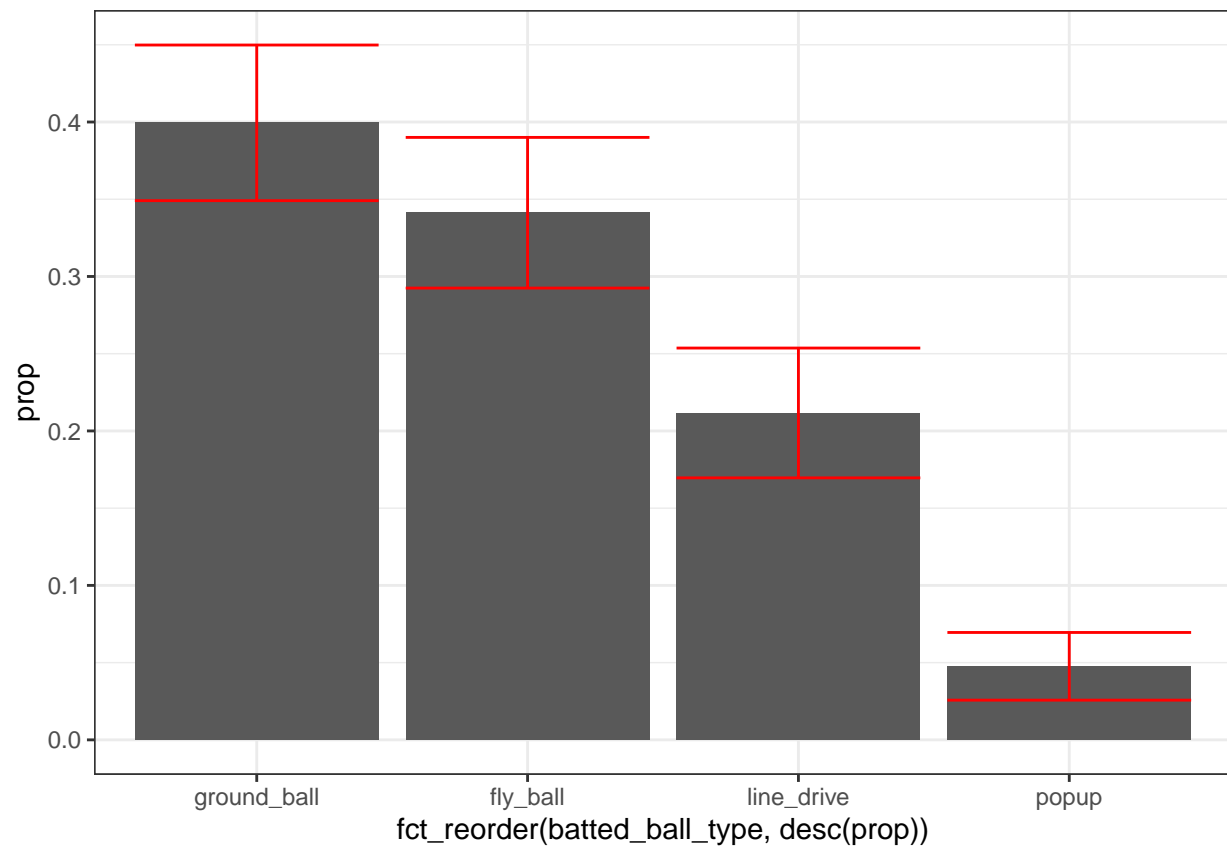
ohtani_batted_balls %>%
  group_by(batted_ball_type) %>%
  summarize(count = n()) %>%
  ungroup() %>%
  mutate(total = sum(count),
         prop = count / total,
         se = sqrt(prop * (1 - prop) / total),
         lower = prop - 2 * se,
         upper = prop + 2 * se,
         batted_ball_type = fct_reorder(batted_ball_type, prop)) %>%
  #fct_reorder comes from forcats
  ggplot(aes(x = batted_ball_type)) +
  geom_bar(aes(y = prop),
          stat = "identity")+
  geom_errorbar(aes(ymin = lower,
ymax = upper),
color = "red")+
  theme_bw()

```



R Cheatsheets: <https://posit.co/resources/cheatsheets/>

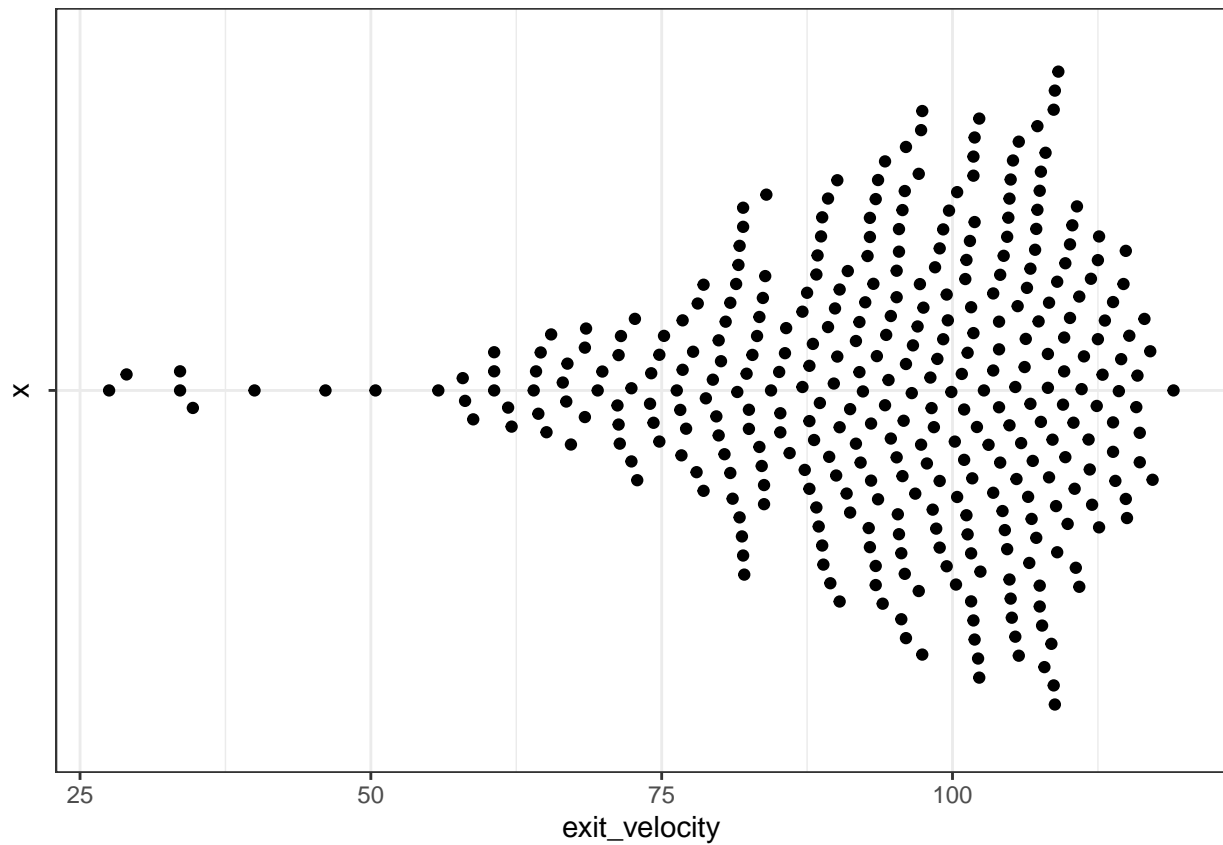
```
ohtani_batted_balls %>%
  group_by(batted_ball_type) %>%
  summarize(count = n()) %>%
  ungroup() %>%
  mutate(total = sum(count),
         prop = count / total,
         se = sqrt(prop * (1 - prop) / total),
         lower = prop - 2 * se,
         upper = prop + 2 * se) %>%
  #fct_reorder comes from forcats
  ggplot(aes(x = fct_reorder(batted_ball_type, desc(prop)))) +
  geom_bar(aes(y = prop),
           stat = "identity")+
  geom_errorbar(aes(ymin = lower,
ymax = upper),
color = "red")+
  theme_bw()
```



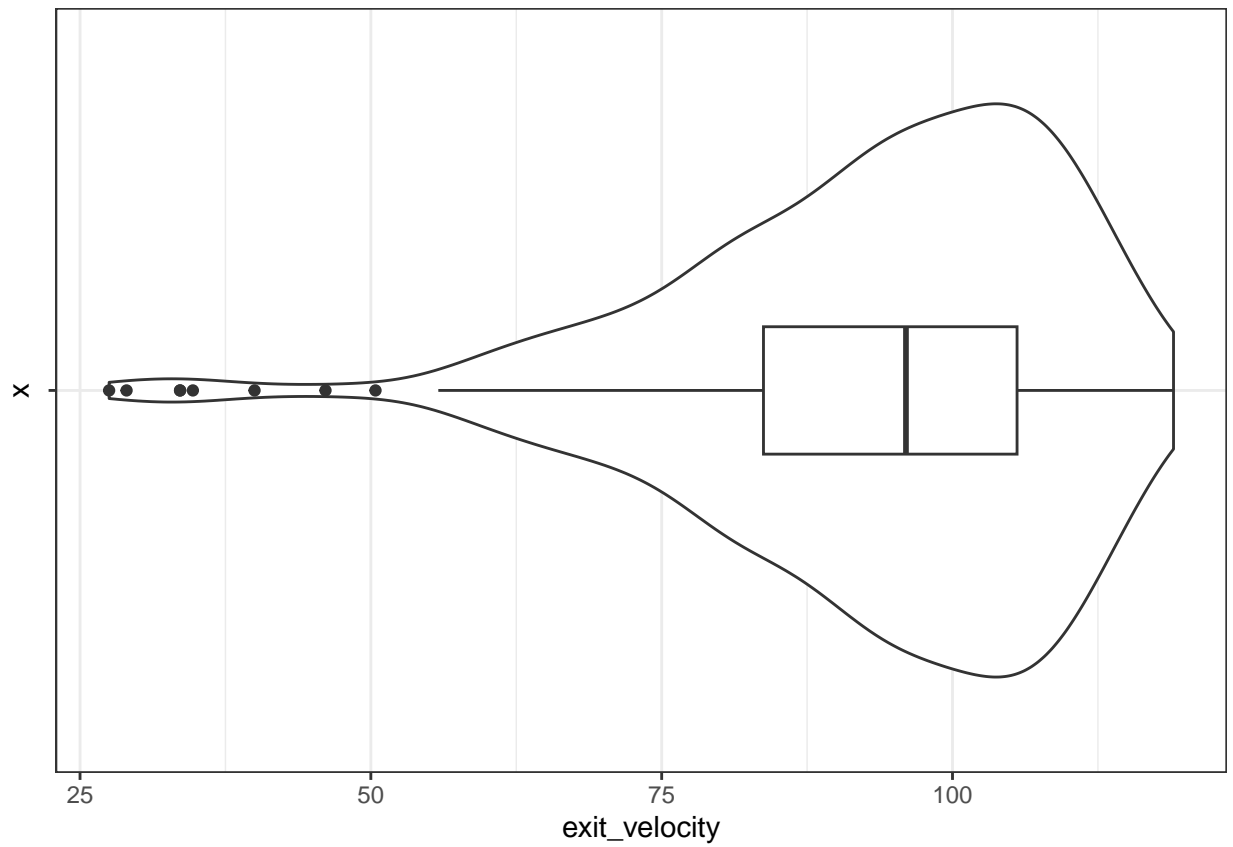
Describing 1D Continuous data

- Boxplots
- Histograms
- eCDF

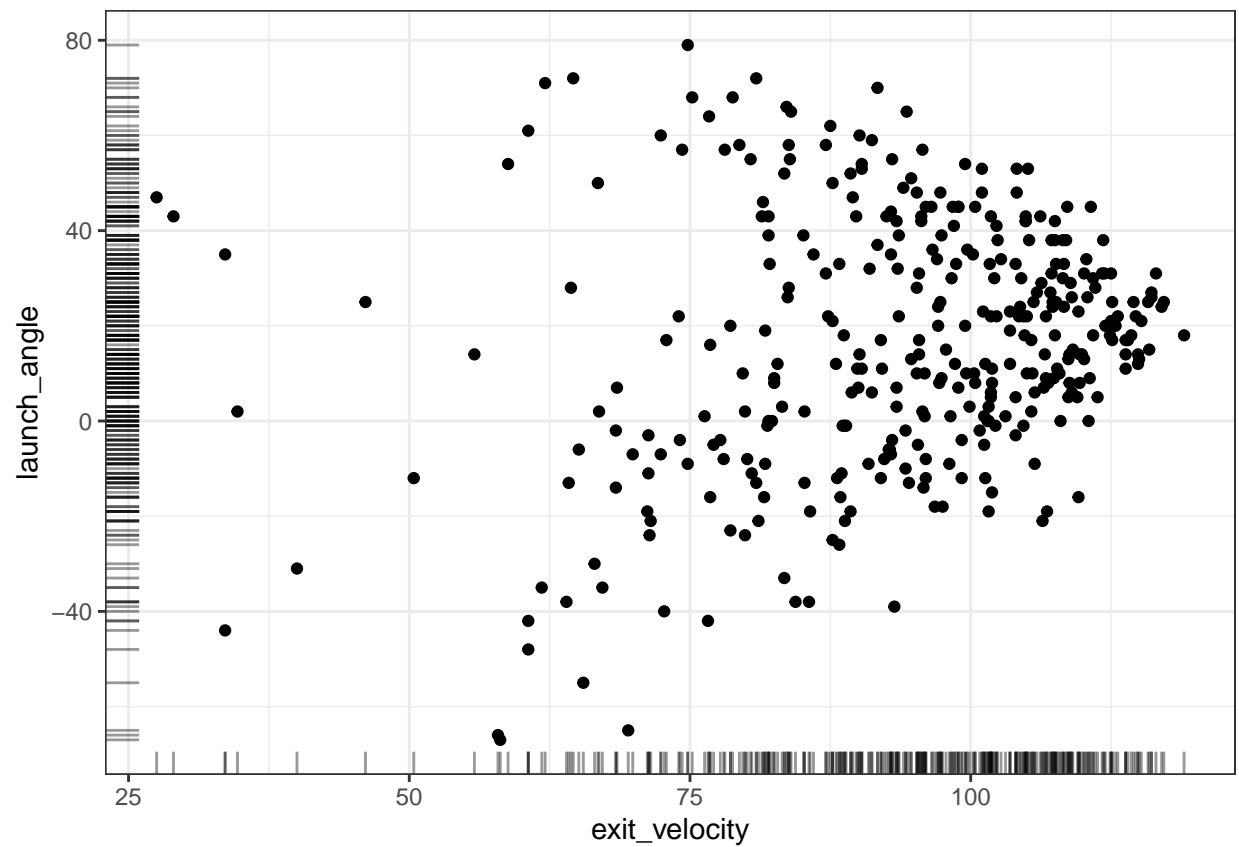
```
library(ggbeeswarm)
ohtani_batted_balls %>%
  ggplot(aes(y = exit_velocity)) +
  geom_beeswarm(aes(x = ""),
    cex = 3) +
  theme_bw() +
  coord_flip()
```



```
ohtani_batted_balls %>%  
ggplot(aes(y = exit_velocity, x = "")) +  
geom_violin()+  
geom_boxplot(width = 0.2)+  
theme_bw() +  
coord_flip()
```



```
ohtani_batted_balls %>%  
ggplot(aes(x = exit_velocity,  
y = launch_angle)) +  
geom_point() +  
geom_rug(alpha = 0.4) +  
theme_bw()
```



```
# geom_rug:  
##Displays raw data points  
## Useful supplement for summaries and 2D plots...
```