Pitch_Location_Analysis

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Aaron Judge and Giancarlo Stanton

Statcast is a state-of-the-art tracking system that uses high-resolution cameras and radar equipment to measure the precise location and movement of baseballs and baseball players. we're going to wrangle, analyze, and visualize Statcast data to compare Mr. Judge and Mr Stanton

Batted ball events-which is any batted ball that produces a result. This includes outs, hits, and errors. Lets find the counts of batted ball events for each player in 2017

Judge

```
##                       events   n
## 1                  strikeout 207
## 2                  field_out 146
## 3                       walk 116
## 4                     single  75
## 5                   home_run  52
## 6                     double  24
## 7  grounded_into_double_play  15
## 8                  force_out  11
## 9                 intent_walk  11
## 10              hit_by_pitch   5
## 11               field_error   4
## 12       fielders_choice_out   4
## 13                   sac_fly   4
## 14                    triple   3
## 15     strikeout_double_play   1
```

Stanton

```
##                       events   n
## 1                  field_out 239
## 2                  strikeout 161
## 3                     single  77
## 4                       walk  72
## 5                   home_run  59
## 6                     double  32
## 7  grounded_into_double_play  13
## 8                 intent_walk  13
## 9                  force_out   7
## 10              hit_by_pitch   7
## 11               field_error   5
```

```
## 12                  sac_fly   3
## 13      fielders_choice_out   2
## 14    strikeout_double_play   2
## 15                pickoff_1b   1
```

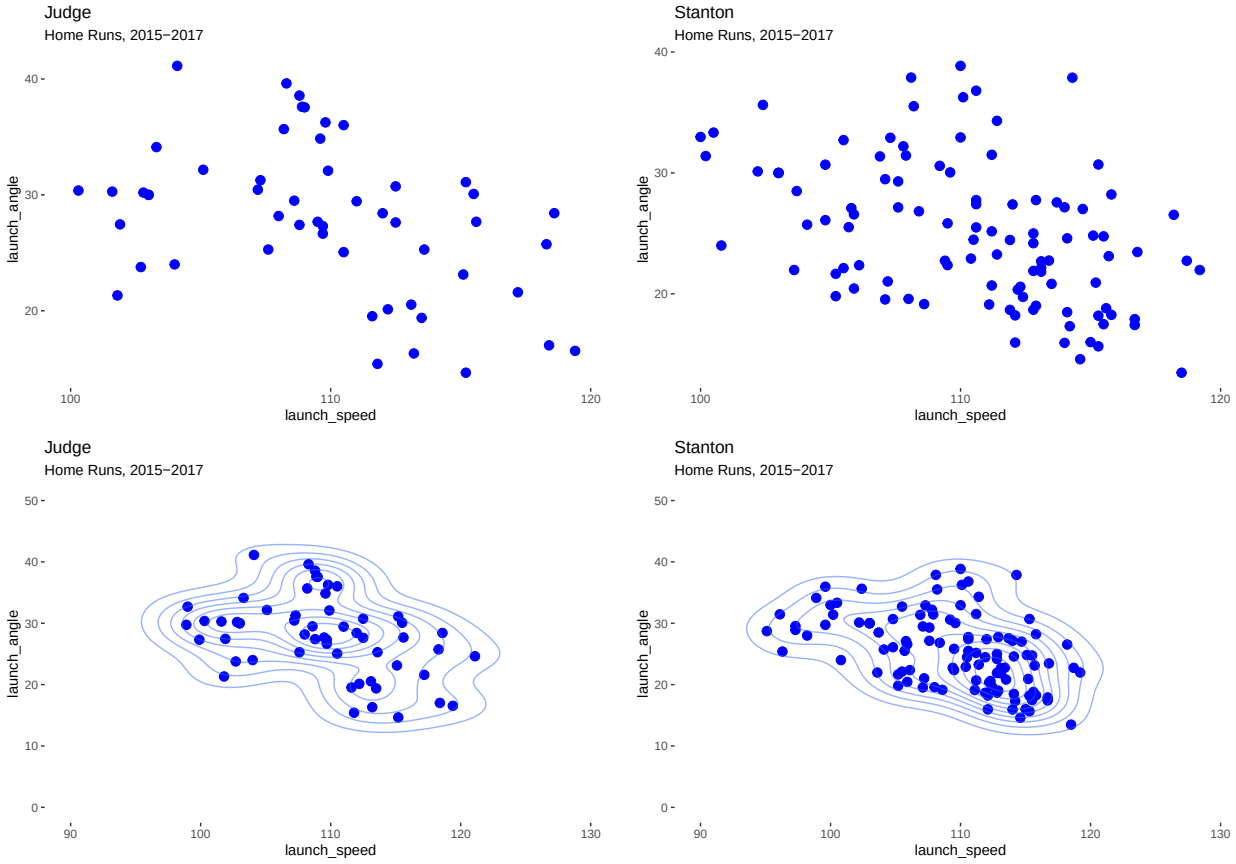
Analysing Home Runs

Launch Speed vs Launch Angle

Two of the most groundbreaking Statcast metrics are launch angle and exit velocity:

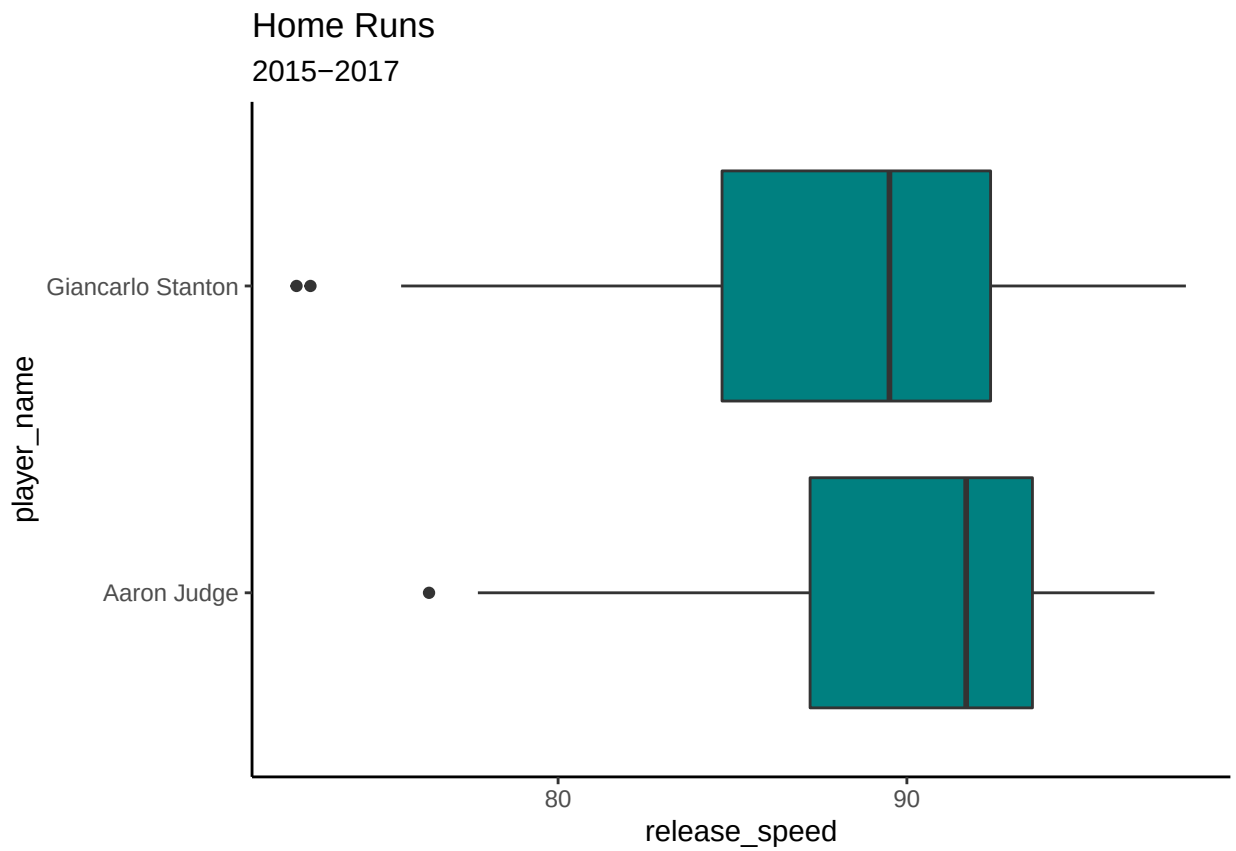
Launch angle: the vertical angle at which the ball leaves a player's bat Exit velocity: the speed of the baseball as it comes off the bat

Let's look at exit velocity vs. launch angle and let's focus on home runs only (2015-2017). The first two plots show data points. The second two show smoothed contours to represent density.



Home Runs by Pitch Velocity

Lets compare Stanton and Judge's home runs in terms of pitch velocity.



Home Runs by Pitch Location

Statcast tracks the zone the pitch is in when it crosses the plate.We can plot this using a 2D histogram.