

# Pitch DS

## ~~Futbol~~ Baseball Analytics



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# Our Value Proposition

Leveling up broadcasting companies with predictive products.

# Predictive Products

1. What's **that** pitch?
2. What the **next** pitch?

# Data Source

- Major League Baseball Stats API
  - <http://statsapi.mlb.com/>

- ## MLB-StatsAPI 0.0.8

```
pip install MLB-StatsAPI
```



Copy to clipboard

r/Sabermetrics

s  
—

Posted by u/Texraider7 5 months ago

### mlb statsapi account

Hi, I'm trying to get data from <http://statsapi.mlb.com>  
o how can I get one?

Thanks.

9 Comments Give Award Share Save

# Data Source

Who	Seattle Mariners
When	2018 Regular Season
What	Play-by-play feed, individual pitches.
How	API + Python Wrapper

# Classifying Pitches:

- Spin Rate
- Break Angles
- Break Length



What's **that** pitch? | **Pitch Classification**

## Advantages:

- Engage viewers
- Enhance graphics
- Stay current



What's **that** pitch? | **Pitch Classification**

- Accuracy:  $> 85\%$
- MLB Average  $\sim 55\%$ 
  - Fastball

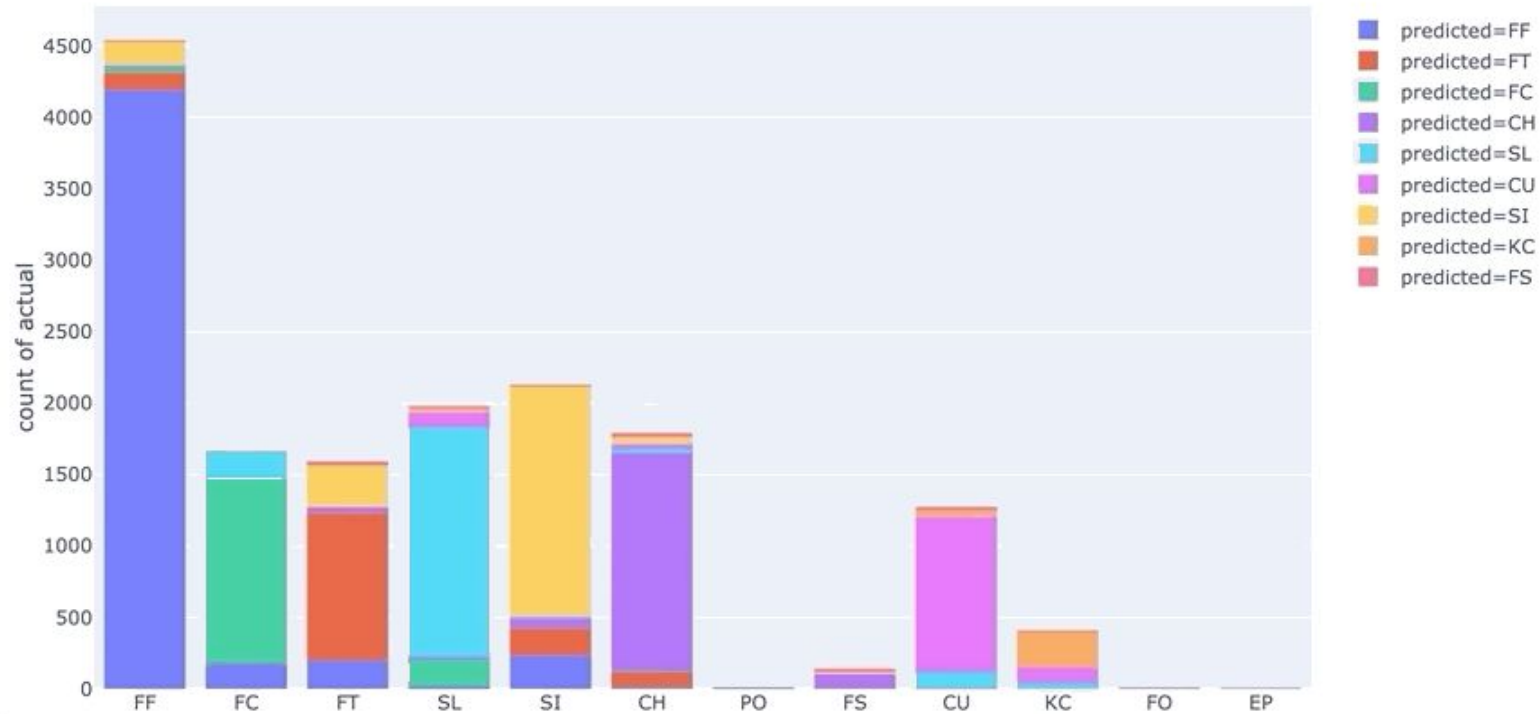
AUC: 0.829

Average Cross Val Score, k=5  
0.871

What's **that** pitch? | **Pitch Classification**



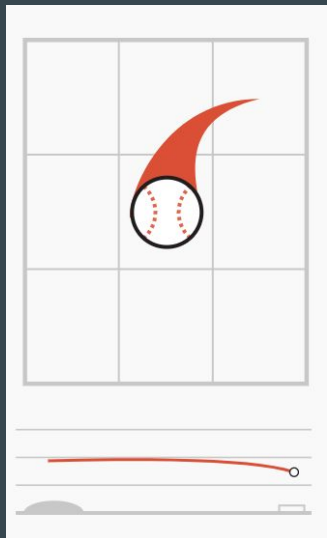
Actual vs Predicted Pitches (Validation Set: August & September 2018)



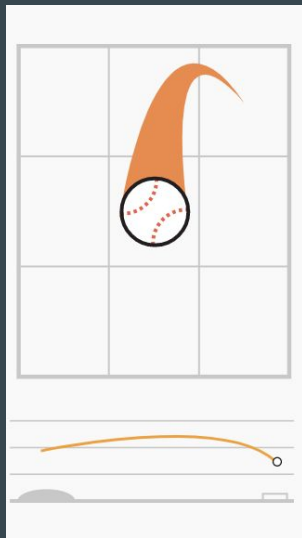
What's **that** pitch? | Pitch Classification

# Game Situation:

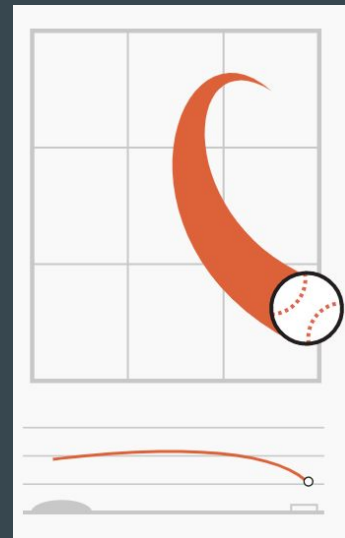
## Fastball



## Changeup



## Breaking Ball



What's the **next** pitch? | Pitch Prediction

## Game Situation:

- Outs | Balls | Strikes
- Handedness
- Previous pitch

What's the **next** pitch? | Pitch Prediction

## Advantages:

- Tally App
- Live Events => future

What's the next pitch? | Pitch Prediction

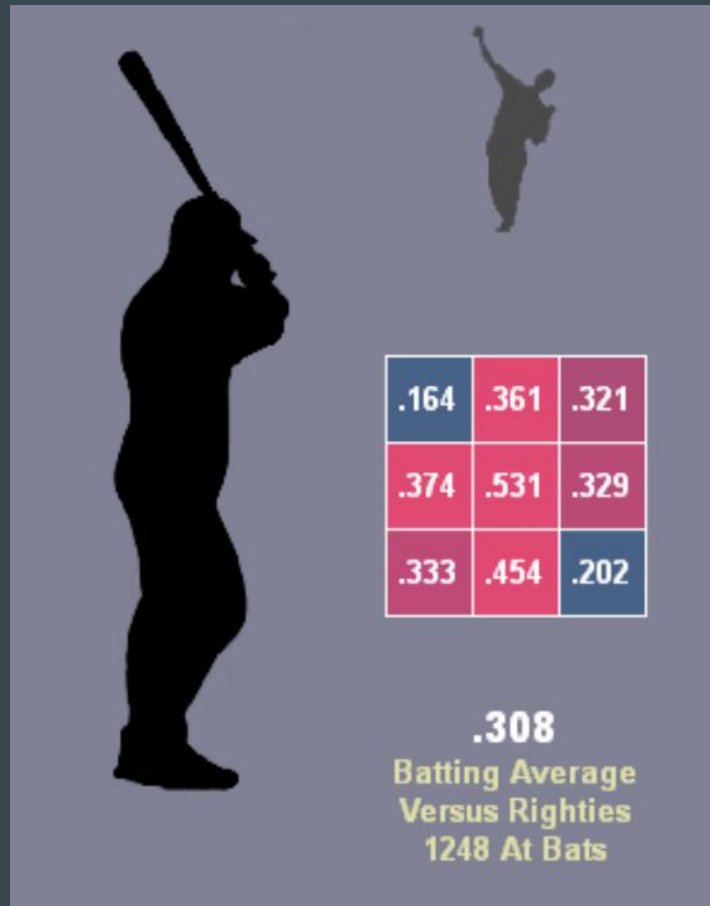
# Still in development!

- Accuracy :  $>0.60$
- AUC :  $>0.50$  🙄

## What's the next pitch? | Pitch Prediction

# Improvements

- Hitter Hot/Cold Zones
- Pitcher Cluster



What's the next pitch? | Pitch Prediction

Thanks. Go M's.

