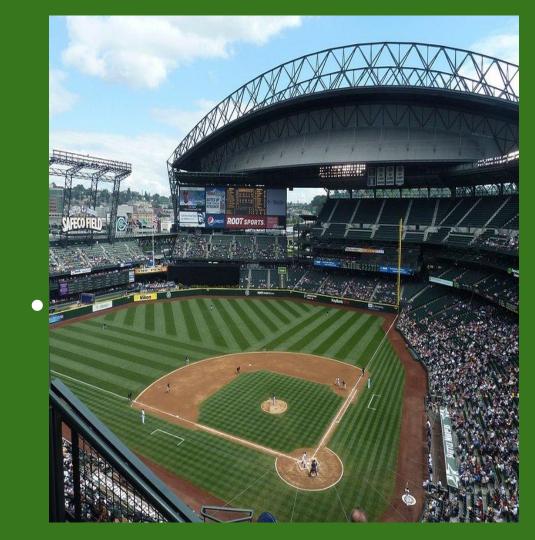
MLB Pitch Analysis

January 3, 2024





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Findings

The model improves accuracy in predicting the outcome of an at bat by 9%.



Business Problem

Business Problem

- Look at features of pitches
- Out recorded or not
- Meaningful predictions?

Business Problem

Data Overview Analysis

Recommendations

Data Overview

Data Overview

Data

- □ 3.5 million pitches from 2015-2019
- □ Data from kaggle.com

Conditions

- Grouped events by out made or not
- ☐ Pitches with highest ratio of getting outs
- □ 283,887 records for modeling

Limitations

- Explanation of some columns lacking
- 2019 data not recorded for some variables

Business
Problem

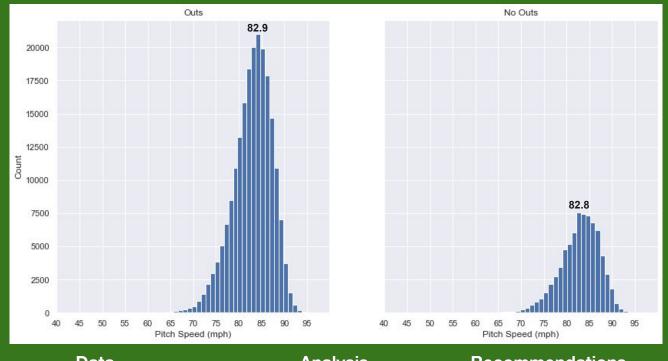
Data Overview Analysis

Recommendations

Analysis



Analysis - Pitch Speed

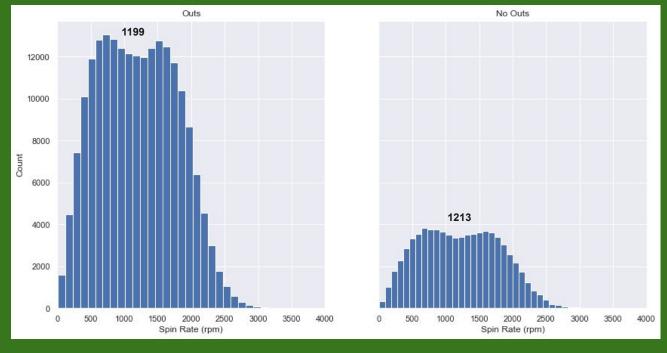


Business Problem

Data Overview **Analysis**

Recommendations

Analysis - Spin Rate

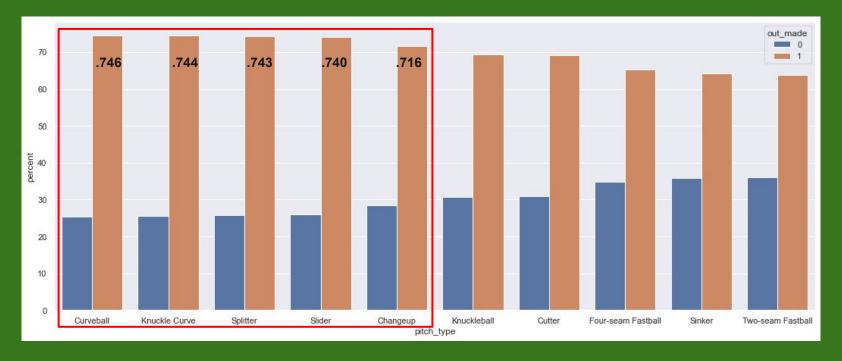


Business Problem

Data Overview **Analysis**

Recommendations

Analysis - Pitch Type



Business Data Analysis Recommendations Future Problem Overview

Analysis - Modeling

Parameters Pitch type Spin rate and direction Pitch location Balanced target Decision Tree Model Decision Tree Model Accuracy 59.6%

Business Data Analysis Recommendations Future
Problem Overview Insights

Recommendations

Recommendations

Business Problem Data Overview Analysis

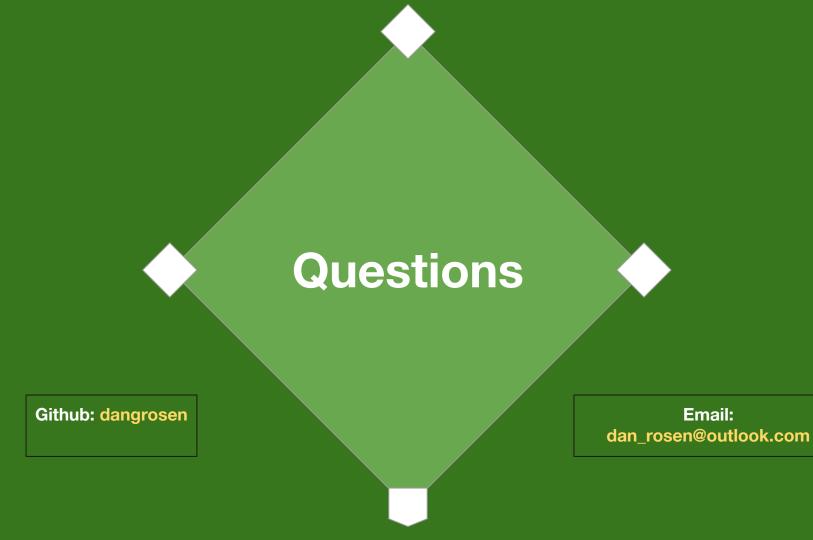
Recommendations

Future Insights

Future Insights

Business Problem Data Overview Analysis

Recommendations



Appendix