

Heat Maps for Highschool Baseball Players

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Outline

Goal of Project

Client

What is a Heatmap?

Characteristics

Defining Factors

Methods of Accomplishment

Issues

Goal

- ◇ Give reliable data to hitters
- ◇ Establish patterns for hitters to look for while at the plate
- ◇ Give a color-coded indication of the strike zone

Client

- ◆ JCS high school varsity baseball
- ◆ The programs that are available cost upward of \$35000
- ◆ Allow the batters to develop a scouting report on themselves

What is a Heatmap

- ◆ A heatmap in the context of baseball refers to a color-coded strike zone
- ◆ The colors on the strike zone are determined by the performance of the hitter in the specified locations.

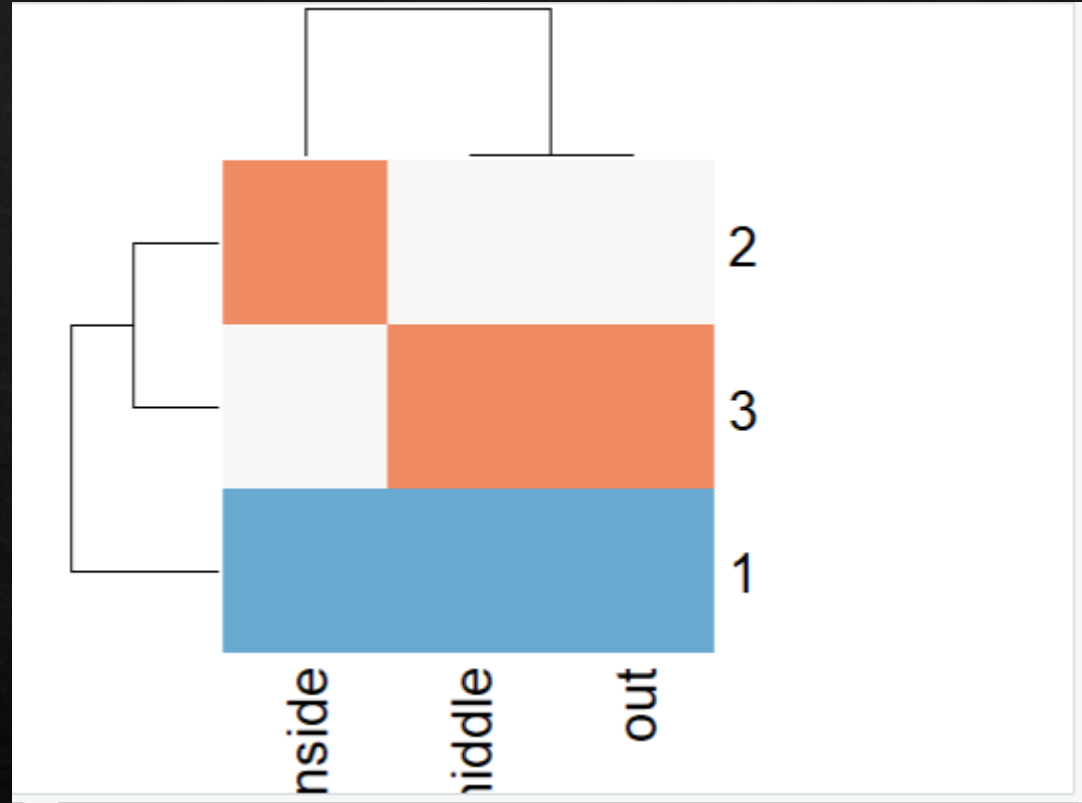
Characteristics

- ◇ The program is written in R
- ◇ R is a statistical computing and graphics language
- ◇ R is used by analysts for MLB to track sabermetrics

Defining Factors

- ◆ The Strike zone is defined by the numbers 1-9
- ◆ If a hitter is batting over .300 the zone is red
- ◆ White is the area between .200 - .300
- ◆ If a hitter is batting below .200 the zone is blue

This is the result of the of
the 3x3 strike zone with data



Defining Factors

- ◇ Pitch type
- ◇ Pitch location
- ◇ Right/Left-handed pitcher
- ◇ Count

Methods of Accomplishment

- ◊ Testing
 - ◊ Using data from MLB to ensure program works
- ◊ Tracking data
 - ◊ Keeping a running log of accurate data

Issues

- ◇ Defining balls
- ◇ The players asked for a way to only see frequency of pitches thrown
- ◇ Defining a successful at bat

Defining Balls

- ◇ Ball- is a pitch not thrown in one of the 9 zones
- ◇ Zones 10-13 are used to track balls not ruled a strike
- ◇ These zones help hitters to identify where their weakness are

Frequency Charts

- ◇ Using bar graphs
- ◇ Hitters were able to decide which pitches to look for

This is sample data gathered to create a frequency chart in order to make sure the customer was satisfied with the result of the frequency chart.

[illegible]

Successful At Bat

- ◇ For this program, a hit is a successful at bat
- ◇ This program could have the flexibility to track hard hits
- ◇ Velocity off the bat

Questions?