

# Final Project Idea

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## Research Question:

Controlling for salary, does the linear trend predicting number of home runs hit every year change through time? Additionally, does batting hand significantly moderate the effect of year on home runs and/or does league moderate the effect of year on home runs?

## Technique:

Segmented Regression with Interactions

## Variables:

### 1. Dependent Variable

- Home runs
  - Quantitative

### 2. Independent Variables

- Year
  - Quantitative
- Salary
  - Quantitative
- Batting Hand
  - Qualitative: Left/Right/Both
- League
  - Qualitative: American League/National League

## Source:

I will be getting data from a baseball database compiled by author and journalist, Sean Lahman. This database contains baseball statistics from 1871 - 2018. The data for different batting statistics are in different files so, I will manipulate the files using either BigQuery or R to create a comprehensive dataset.

The database information and download links can be seen in the following link:  
<http://www.seanlahman.com/baseball-archive/statistics/>.