Altitude and Its Effect on MLB Park Factor

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1 PROBLEM STATEMENT/MOTIVATION

Since its creation in 1993, Coors field has notoriously been one of the most hitter friendly parks in the major leagues due to the high altitude. The Rockies have tried to combat this by storing baseballs in a humidifier. However, there are several parks across the league that are also considered hitter friendly that are not at a high elevation.

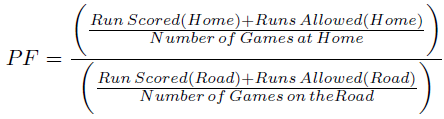


**Figure 1:** Humidors in Coors Field to keep the baseballs from getting dry

Our goal is to look at teams and players stats throughout the stadiums played in the MLB (pitching, hitting, and fielding) and try to determine how big of an impact altitude has on players stats and the game of baseball in general.

2 LITERATURE SURVEY

This idea of the park affect at Coors Field and many other stadiums across the league has been debated for a long time, thus there is lots of work on this topic already. However, most of this work deals with teams at a general level, and does not consider the effects of altitude specifically.



**Figure 2:** Current Park Factor Formula

The MLB has instituted a statistic called park factor. However, this statistic does not focus on the altitude of the stadium or anything local to the stadium in general. Instead, it is calculated by comparing a team’s runs scored in games at home versus a team’s runs scored in games on the road. We will differentiate from this, as we will focus on team’s offensive, defensive, and pitching performances at different altitudes.

3 PROPOSED WORK

4 DATA SET

Our dataset is from the Retrosheet database. This database contains every single play that has occurred in every MLB game since 1989. In addition to what actually happened on each play, this database also contains how many outs there are, how many runners are on base, how many pitches were thrown in the at bat, what specific kind of pitch was used, where the ball was hit, who was at each fielding position, and much more.

5 EVALUATION METHODS

6 TOOLS

7 MILESTONES

8 SUMMARY OF PEER REVIEW SESSION