Performance by Pitch Count Documentation

Reasoning

The purpose of the performance by pitch count table is to assess how well a starting pitcher performs in different pitch count ranges, based on xwOBA against in each “count bucket”. This table is generated weekly for each affiliate’s opponent and contains every potential starter currently rostered on the opposing team.

Acquiring Data for Qualifying Pitchers

The process of finding qualifying pitchers for that week is fairly straightforward. Performance data is found from the start of the previous season to the current date for each level competed at. To be considered, each pitcher must meet the following criteria:

- Must have made AT LEAST 1 start in the current season
- Only starts of 60+ pitches are considered
- A minimum of 50 pitches per bucket is required to display an xwOBA value

The pitch count buckets are broken into 1-25, 26-50, 51-75, and 76-100. 101+ pitches are not displayed due to infrequency.

If a pitcher does not have enough data to qualify at their current competition level, their most recent qualifying level is displayed.

The Table

For each qualifying pitcher, the data from their current competition level (or most recent qualifying level) is displayed, including the xwOBAs for each pitch count bucket and total pitches thrown at that level so far. The average, minimum, and maximum xwOBAs across all buckets were found to provide context for the values in each pitch bucket. The buckets are conditionally formatted where xwOBAs worse than average are wrapped in a more blue color pill and better than average are in a more red color pill. An example of a table is provided below.

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Pitcher xwOBA by *Pitch Count*

San Antonio Missions

Pitcher	Level	Total Pitches	1-25	26-50	51-75	76-100
Henry Baez	AA	300	0.314	0.307	0.325	—
Ryan Bergert	AA	1627	0.271	0.350	0.354	0.365
Daniel Camarena	AA	767	0.282	0.381	0.464	—
Miguel Cienfuegos	AA	150	0.104	0.423	0.381	—
Austin Krob	AA	1474	0.328	0.327	0.366	0.415
Victor Lizarraga	AA	1386	0.272	0.345	0.402	0.403
Samuel Whiting	A+ *	150	0.289	0.392	—	—

Data covers starts of 60+ pitches since 2023 for pitchers with at least 1 start in 2024 (min. 50 pitches/bucket).

** Indicates data comes from most recent qualifying comp. level.*

Message to Code Manager

The script for the performance by count table can be found in Databricks in `databricks_analytics/Lance/Performance_By_Count/Performance_by_Count_Table`. You will need to set up a job to run each Sunday around 6 pm so each affiliate can receive the table before their designated off-day on Mondays.

Also, once the season gets going you can assess a point where there is enough data to remove the previous season's numbers and only use the current season's data. This will be a couple months into the season typically.