Baseball Statistics Colloquium

Leo Gentile

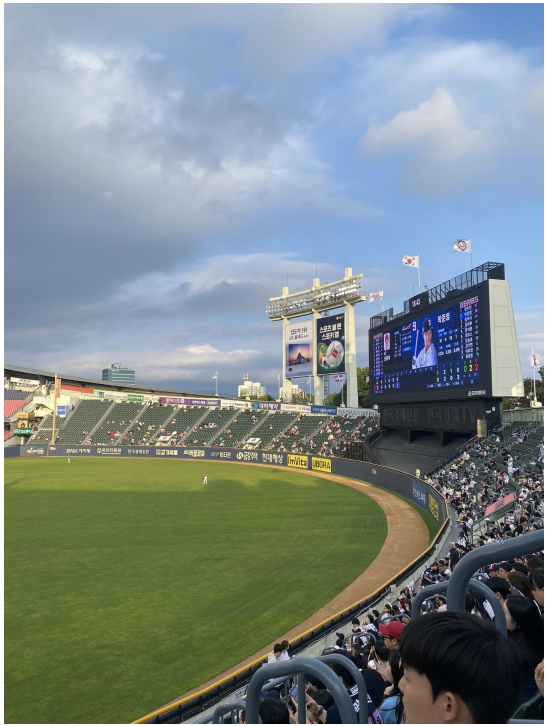
Outline

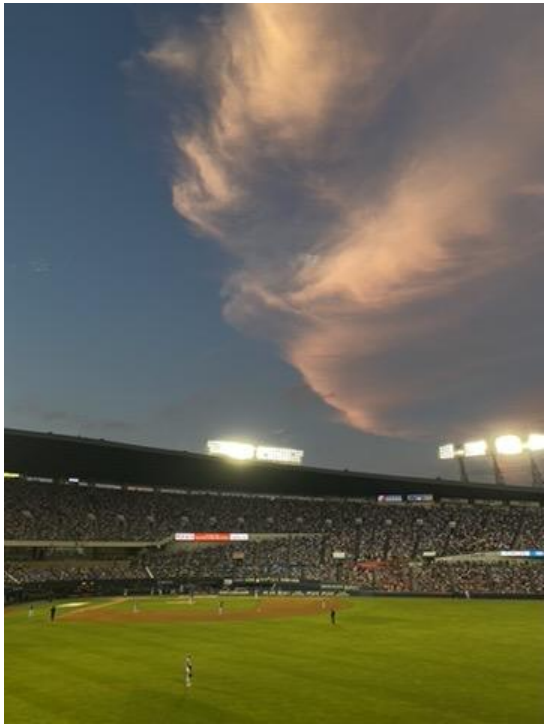
- South Korea
- Japan
- Independent Study
- MLB Summer Internship

Outline

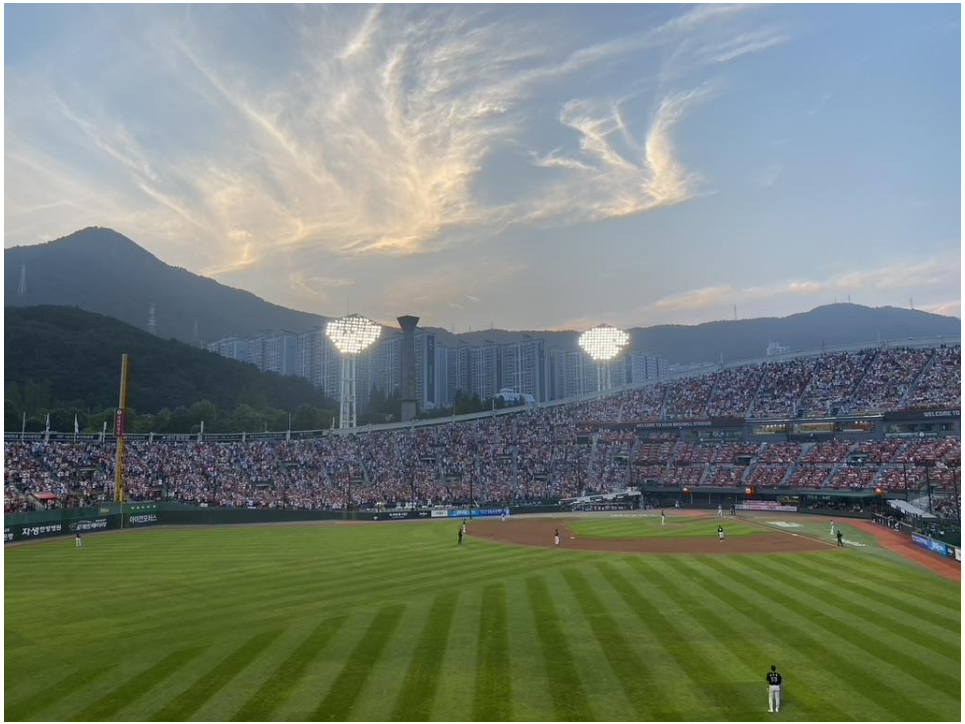
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South Korea - Jamsil Baseball Stadium



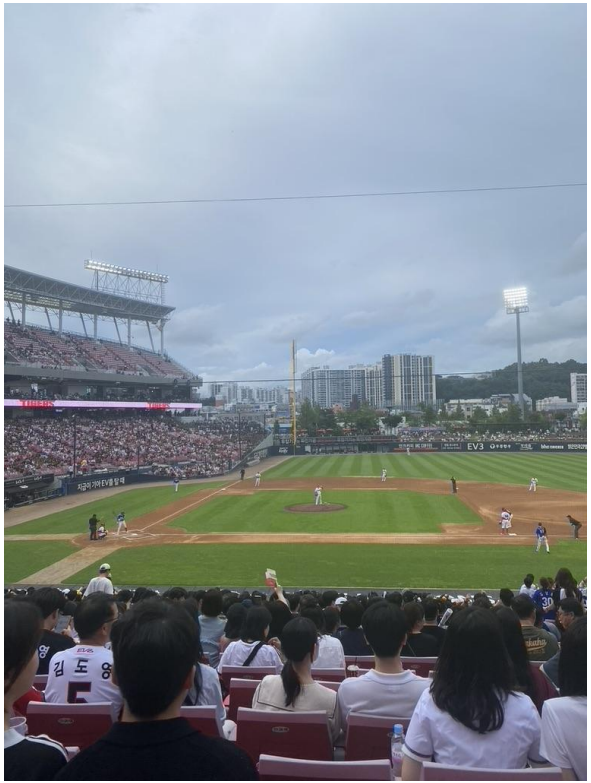


South Korea - Sajik Baseball Stadium





South Korea - KIA CHAMPIONS FIELD



South Korean Pitchers



Gwak Been (Doosan Bears)



Won Tae-In (Samsung Lions)

Outline

- South Korea
- **Japan**
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Japan - Meiji Jingu Baseball Stadium





Tokyo Yakult Swallows

Japan - Tokyo Dome





Japan - Japanese Baseball Hall of Fame and Museum







Japan - Kyocera Dome Ōsaka





Japan - Mazda Zoom-Zoom Stadium Hiroshima



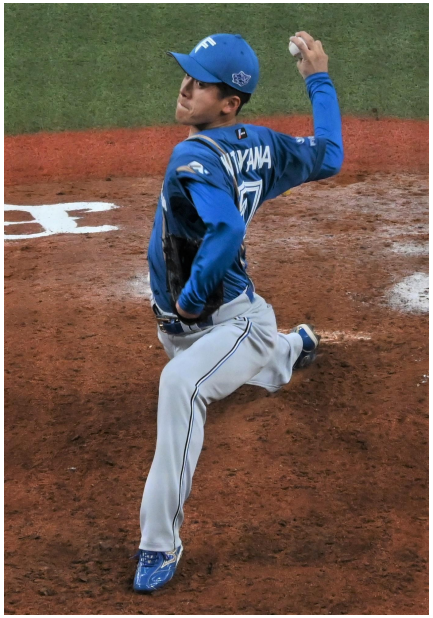




Notable Japanese Pitchers



Hiromi Itoh (Hokkaido Nippon-Ham Fighters)



Koki Kitayama (Hokkaido Nippon-Ham Fighters)



Hiroya Miyagi (Orix Buffaloes)

Outline

- South Korea
- Japan
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Independent Study - Miami Marlins Analysis

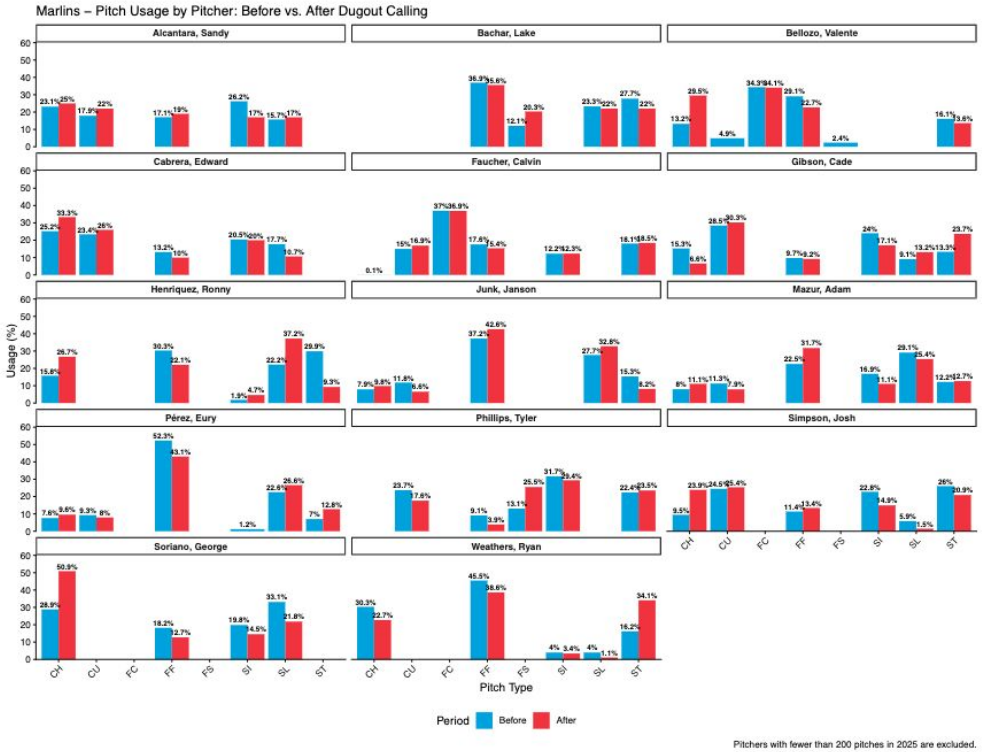


Figure 1: Pitch type usage for each Marlins pitcher before (blue) and after (red) the dugout pitch-calling change. Pitchers with fewer than 200 pitches excluded.

Independent Study - Miami Marlins Analysis

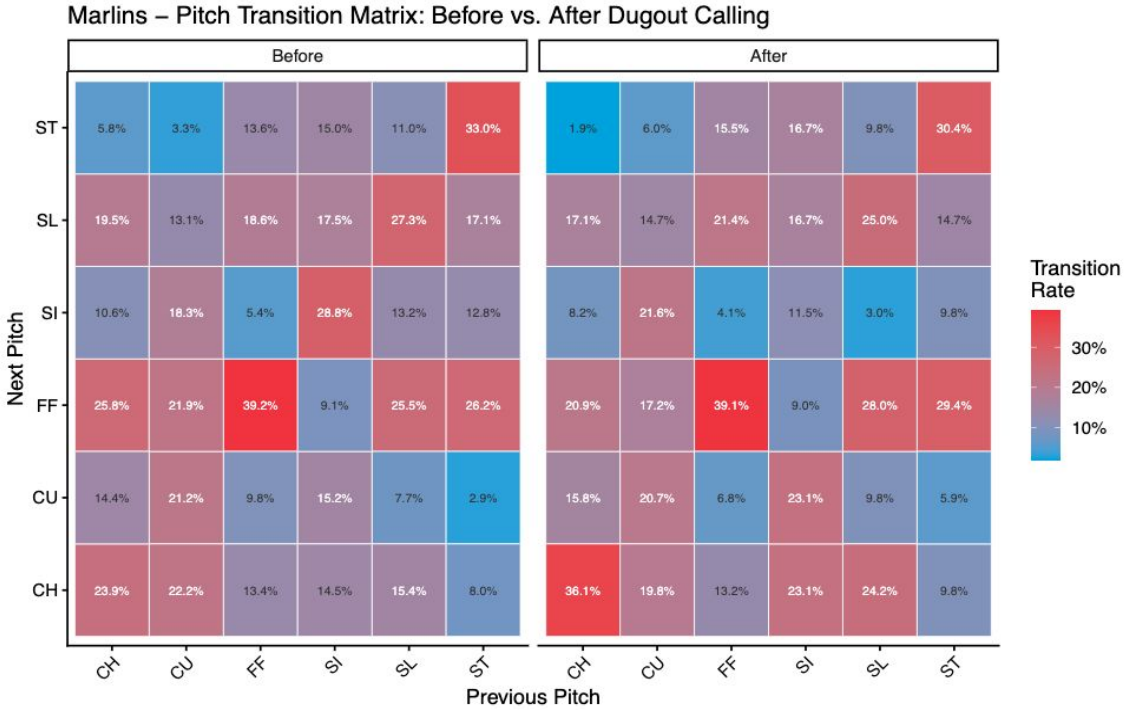


Figure 5: Pitch transition probability matrix for Marlins pitchers before and after the dugout calling change. Color intensity reflects transition rate. Only pitch types with 100+ pitches in both periods shown.

Ryan Weathers (MIA now NYY) - 2025



Ryan Weathers

P | New York Yankees

Bats/Throws: R/L | 6' 1" 230 lbs | Age: 26

Draft: 2018 | Rd. 1, No. 7, San Diego Padres | Loretto HS

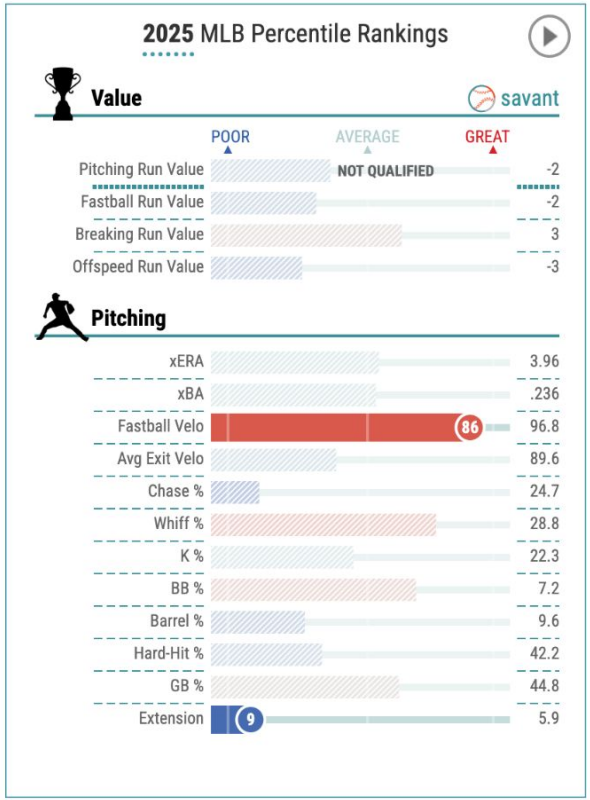
	W	L	ERA	G	GS	SV	IP	SO	WHIP
2024	5	6	3.63	16	16	0	86.2	80	1.18
2025	2	2	3.99	8	8	0	38.1	37	1.28
2026	2	2	3.00	8	8	0	45	54	1.11
6 Seasons	14	25	4.67	78	63	1	326	289	1.35

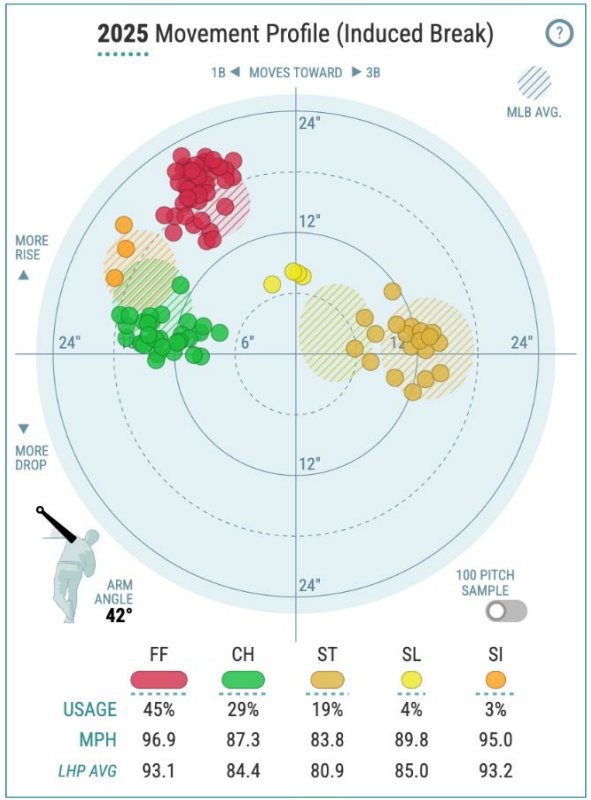
Player Apps

Random Video
illustrator
Visual Report
3D Pitches
Player Similarity
Swing Take Profile

2025 Pitch Usage

vs. LHH	Pitch	vs. RHH
45%	FF 45%	45%
18%	CH 29%	32%
28%	ST 19%	16%
2%	SL 4%	4%
6%	SI 3%	2%





Ryan Weathers (MIA now NYY) - 2026



Ryan Weathers

P | New York Yankees

Bats/Throws: R/L | 6' 1" 230 lbs | Age: 26

Draft: 2018 | Rd. 1, No. 7, San Diego Padres | Loretto HS

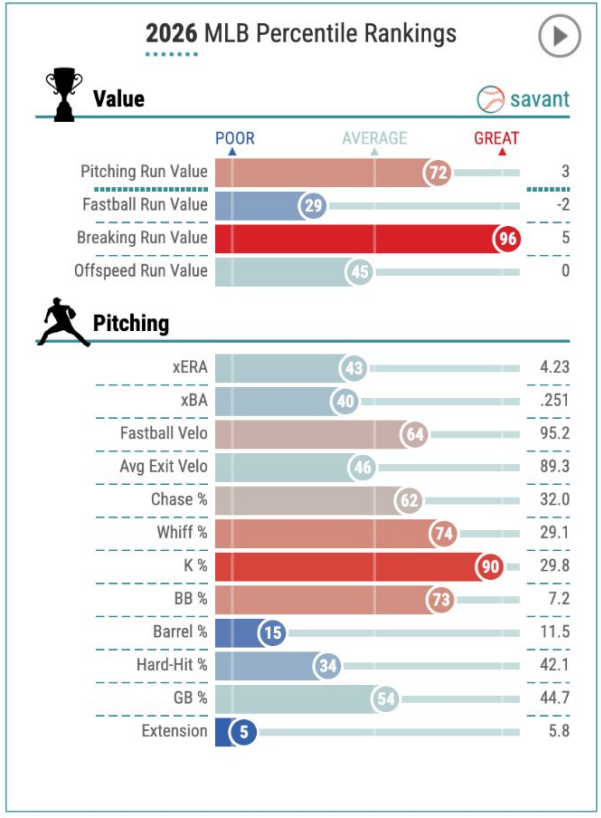
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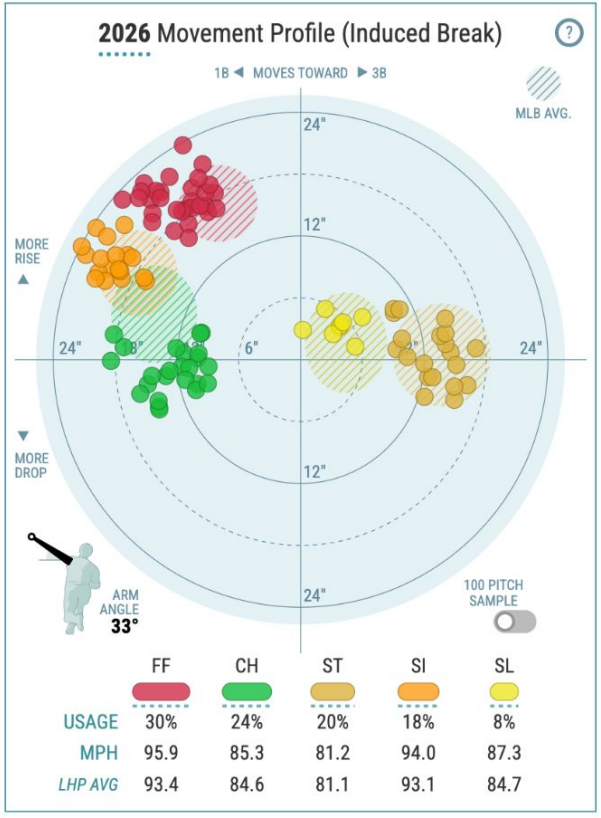
Player Apps

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illustrator
Visual Report
3D Pitches
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Swing Take Profile

2026 Pitch Usage

vs. LHH	Pitch	vs. RHH
11%	FF 30%	34%
8%	CH 24%	27%
31%	ST 20%	18%
37%	SI 18%	14%
13%	SL 8%	7%





Independent Study - Count Effects

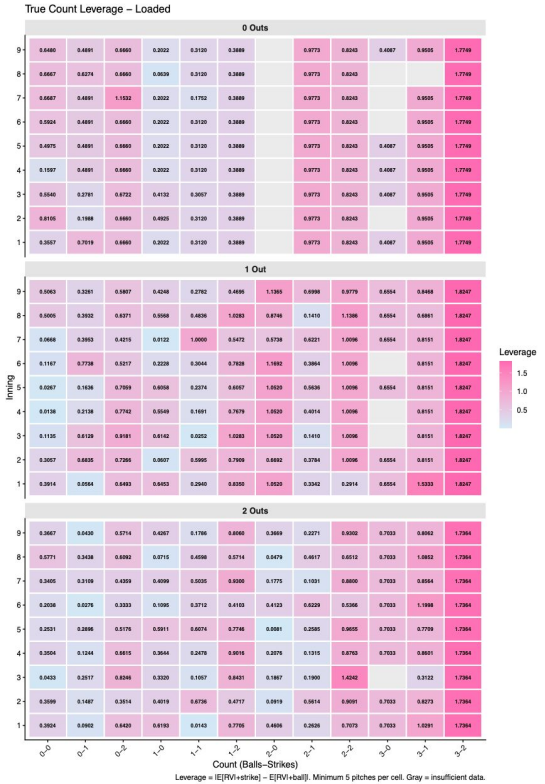


Figure 20: True count leverage — bases loaded.

Independent Study - Count Effects

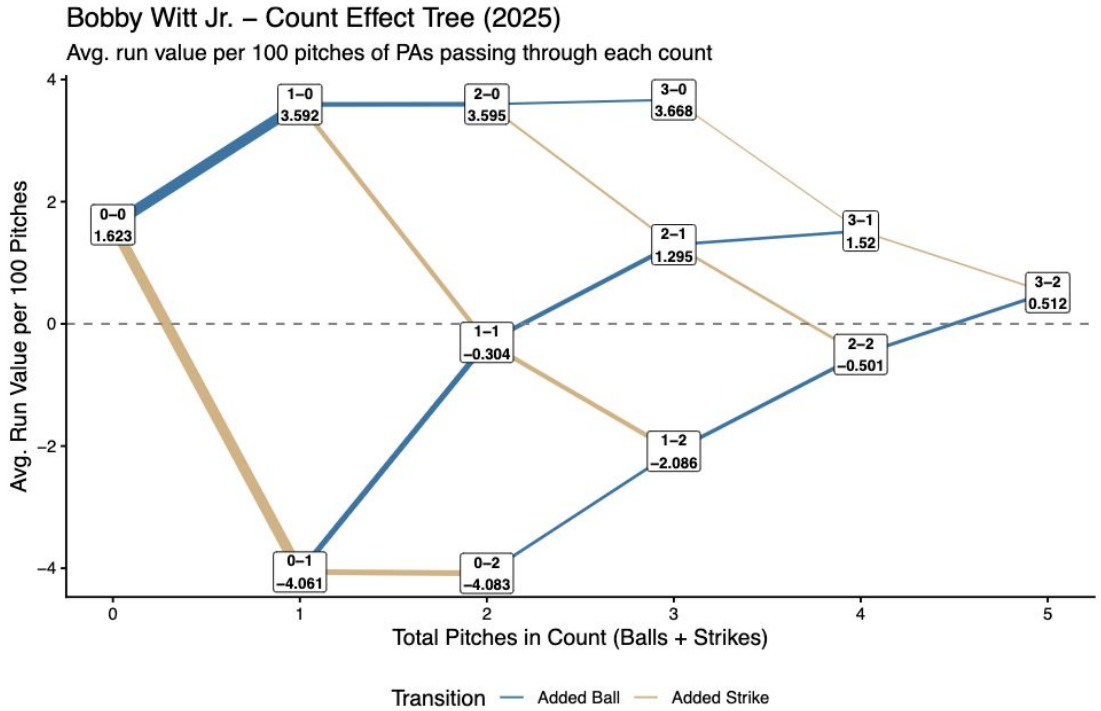


Figure 26: Count effect graph for Bobby Witt Jr. (2025). Y-axis = average run value per 100 pitches of PAs passing through that count. Blue edges = added ball; red edges = added strike. Line width proportional to fraction of PAs visiting each count.

Independent Study - Count Effects

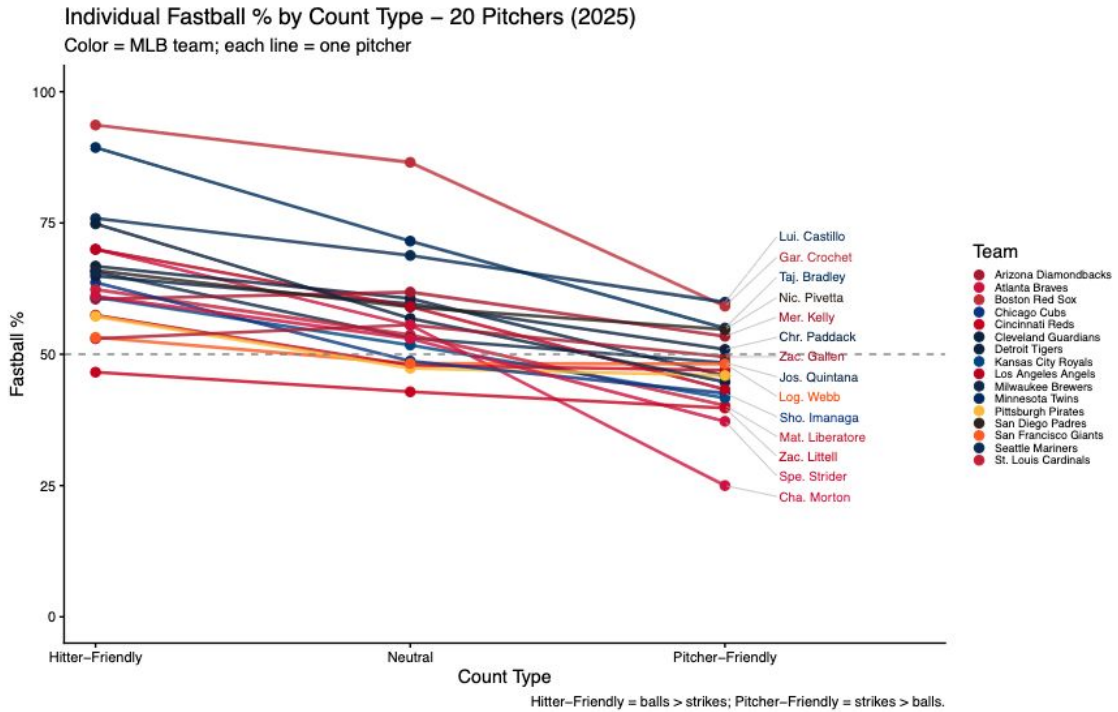


Figure 30: Individual fastball percentage by count type for 20 selected pitchers (2000+ pitches). Each line = one pitcher; color = team.

Independent Study - Pitch Tunneling

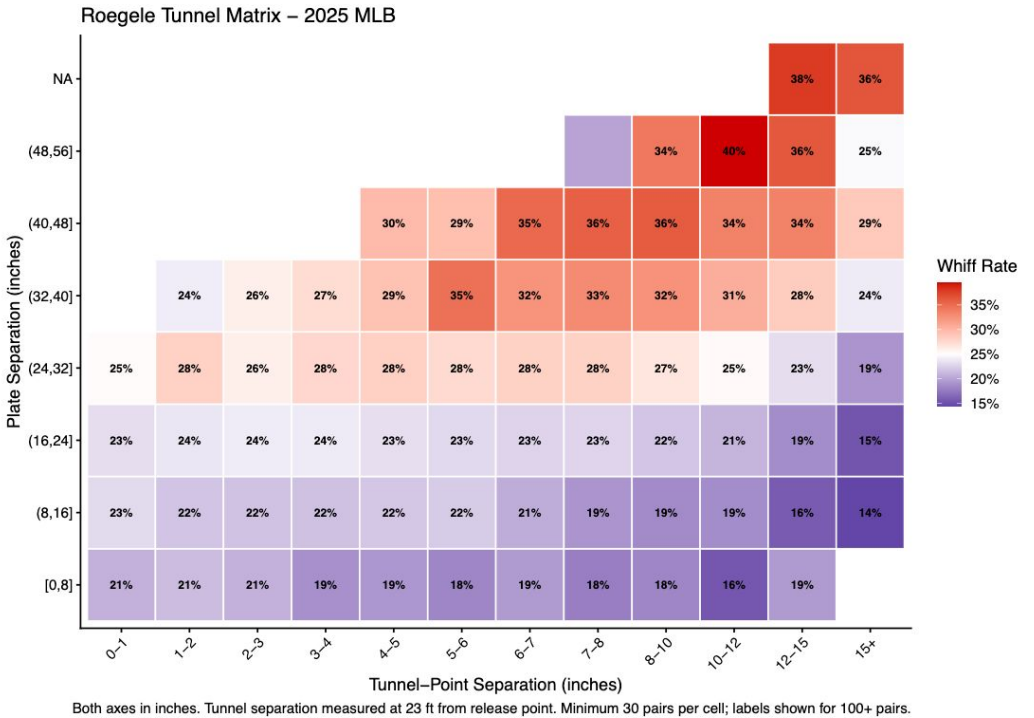


Figure 37: Roegele tunnel matrix (2025 MLB): tunnel-point separation (x-axis) vs. plate separation (y-axis) for consecutive same-PA pitch pairs. Color = whiff rate on second pitch. Minimum 30 pairs per bin. Labels shown for cells with 100+ pairs.

Independent Study - Pitch Tunneling

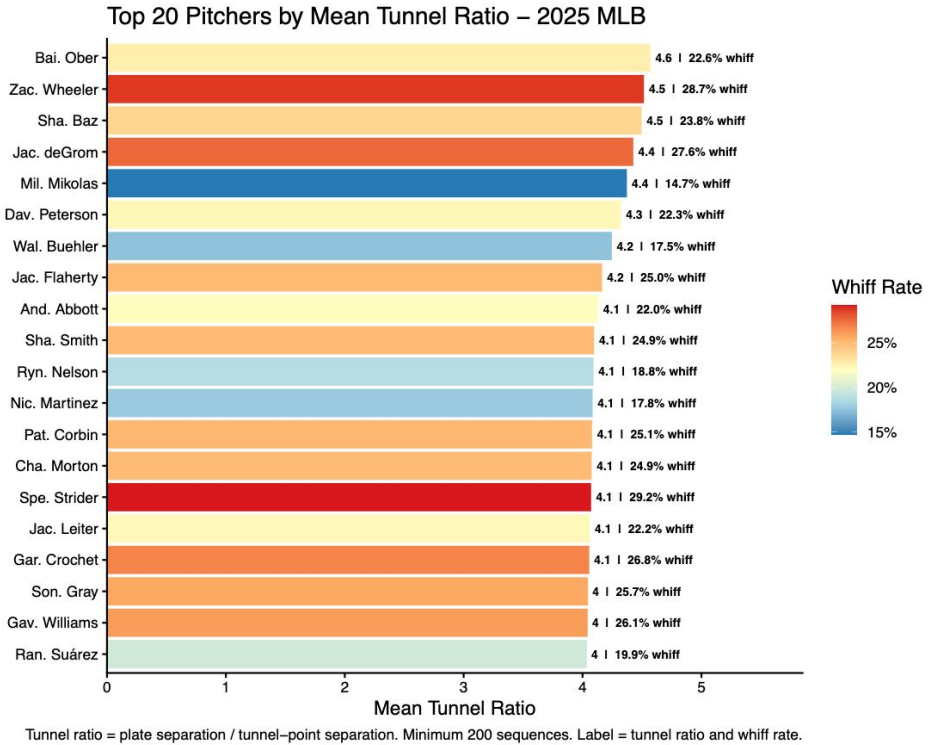


Figure 46: Top 20 pitchers by mean tunnel ratio. Higher ratio = more plate divergence relative to tunnel-point similarity. Color = whiff rate (red = high, blue = low). Labels show tunnel ratio and whiff rate.

Independent Study - Pitch Sequencing

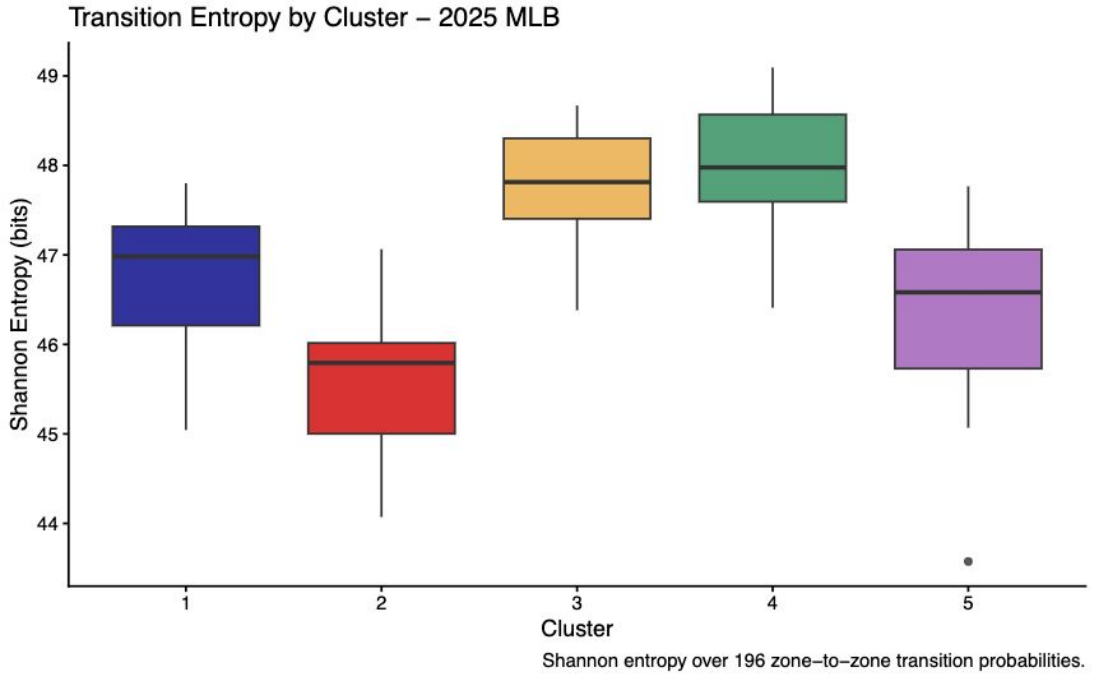
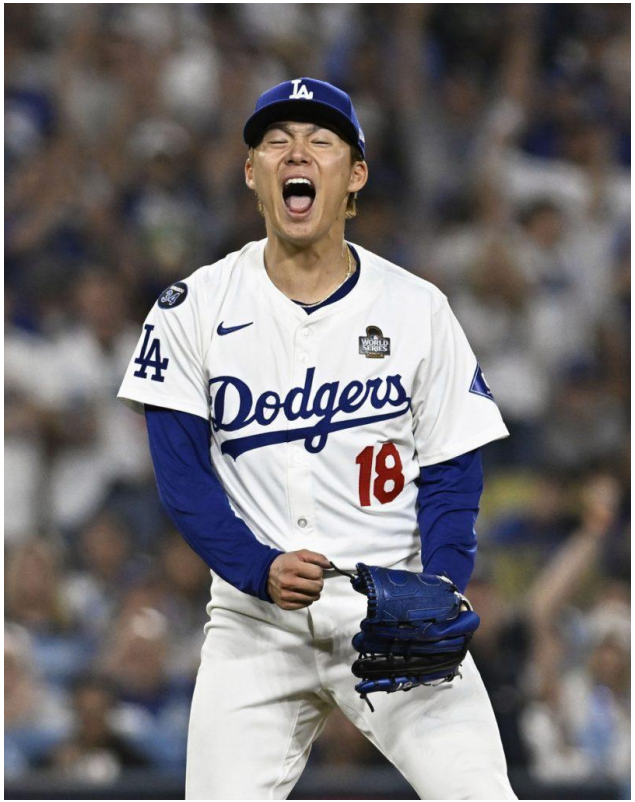


Figure 56: Shannon entropy of each pitcher's 196-element transition distribution by cluster. Higher entropy = more varied, less predictable sequencing.

Independent Study - Yoshinobu Yamamoto Case Study



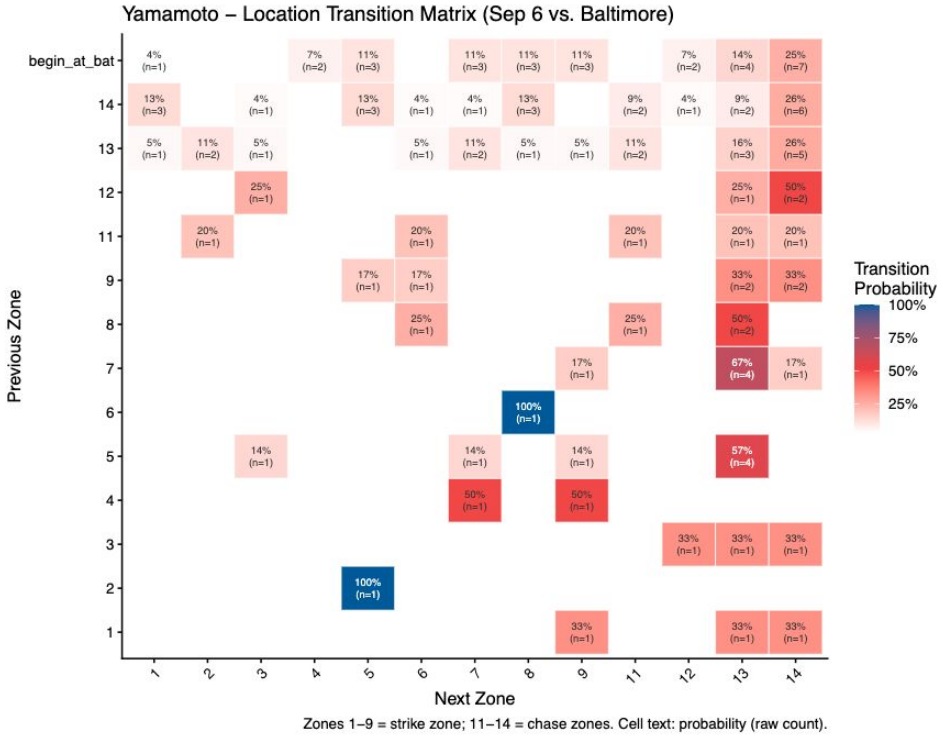


Figure 63: Yamamoto's location transition matrix for the September 6 game vs. Baltimore. Only non-zero transitions shown. Each cell shows transition probability and raw count (n).

Outline

- South Korea
- Japan
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MLB Internship

