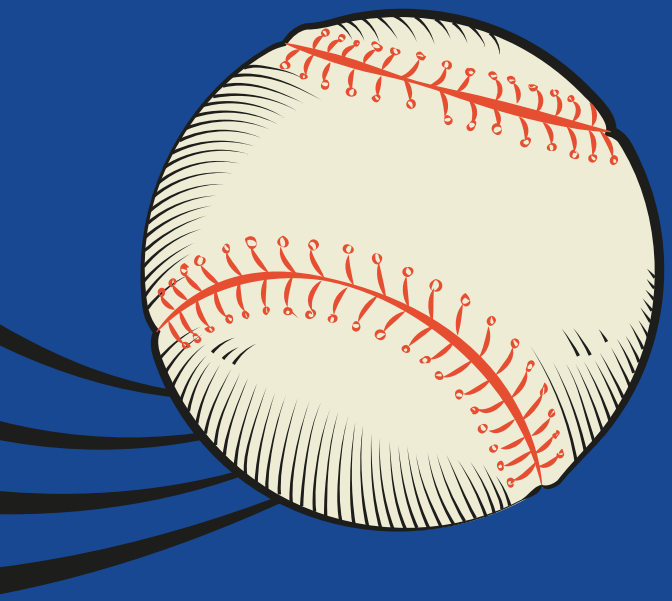

Stolen Bases:

A matter of skill or guts?

Scarlett Valentin

Outline

01 Business Problem

02 Data & Methods

03 Conclusions

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Business Problem

1. Was the increase in stolen bases from 2022 to 2023 ***significant***?

2. What contributes to a high number of ***stolen bases***?

Summary

Significant increase of SB from 2022 to 2023

Increase SB attempts and expect an increase in CS

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Data & Methods

- Data gathered from Baseball Savant

- 130 players from the 2022 season & 133 players from the 2023 season

- Stats include:
  - CS: Caught Stealing
  - SB: Stolen Base
  - Bolts
  - Sprint Speed

Data & Methods

- 2 sample t-test to evaluate SB from 2022 to 2023
- Relationship between SB and the following factors:
  - CS
  - Sprint Speed
  - Bolt

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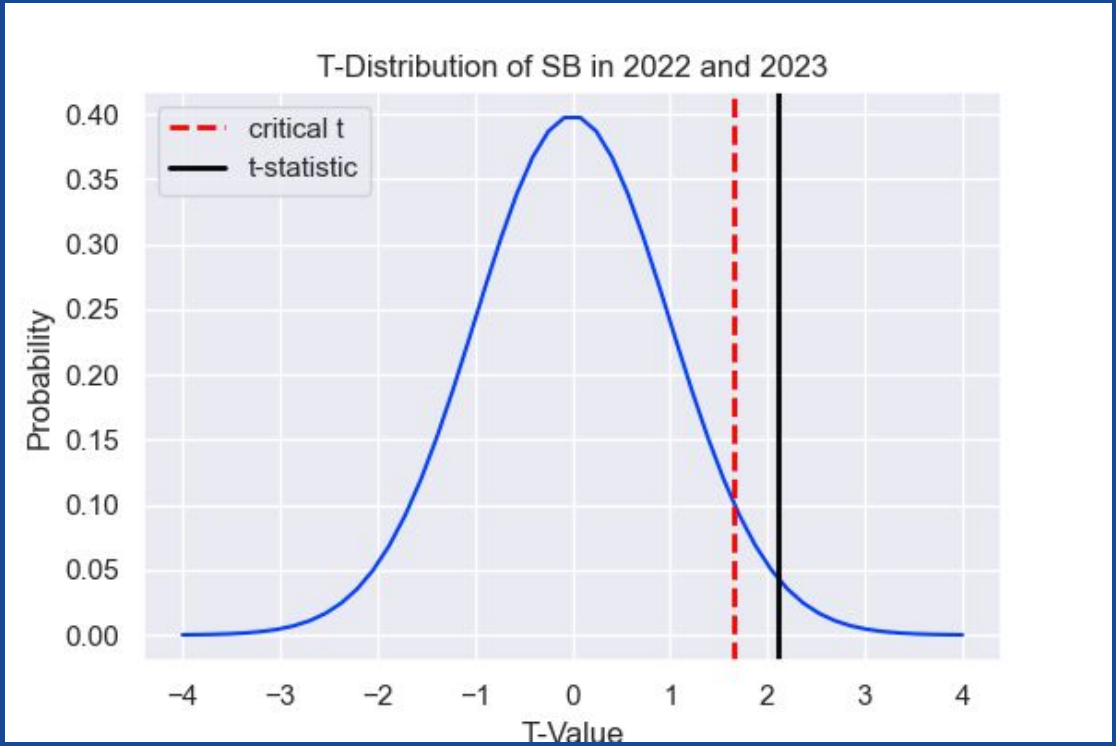
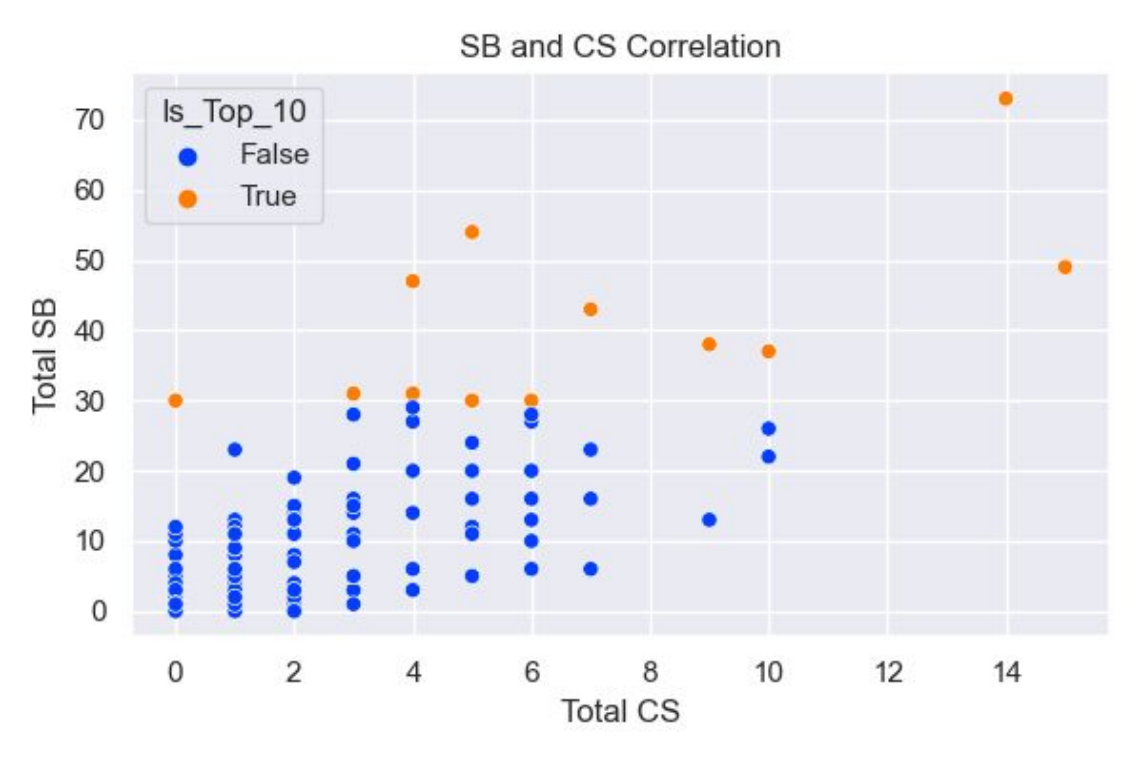
Results

- Significant increase in SB from 2022 to 2023
- alpha value of 5%
  p-value ≈ 0.035
- t-statistic ≈ 2.1
  critical t-value of 1.65



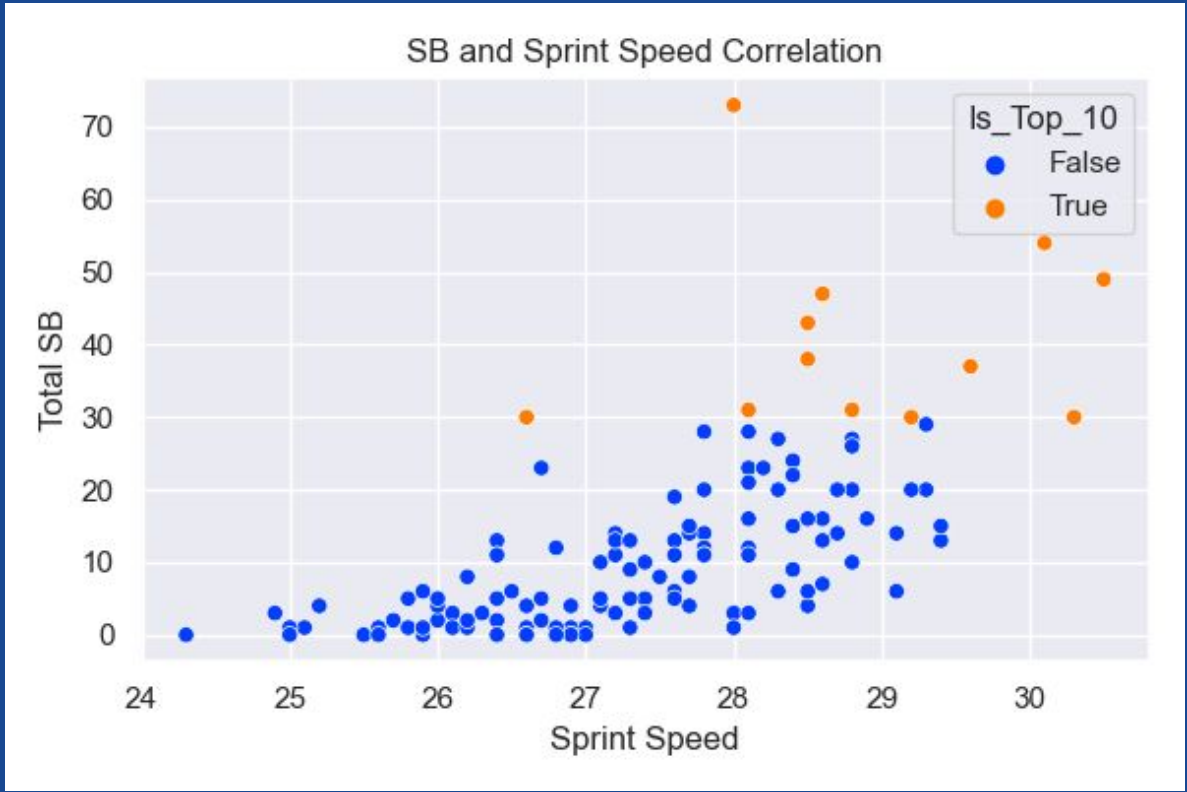
Results

Strong correlation between SB and CS: 0.72



Results

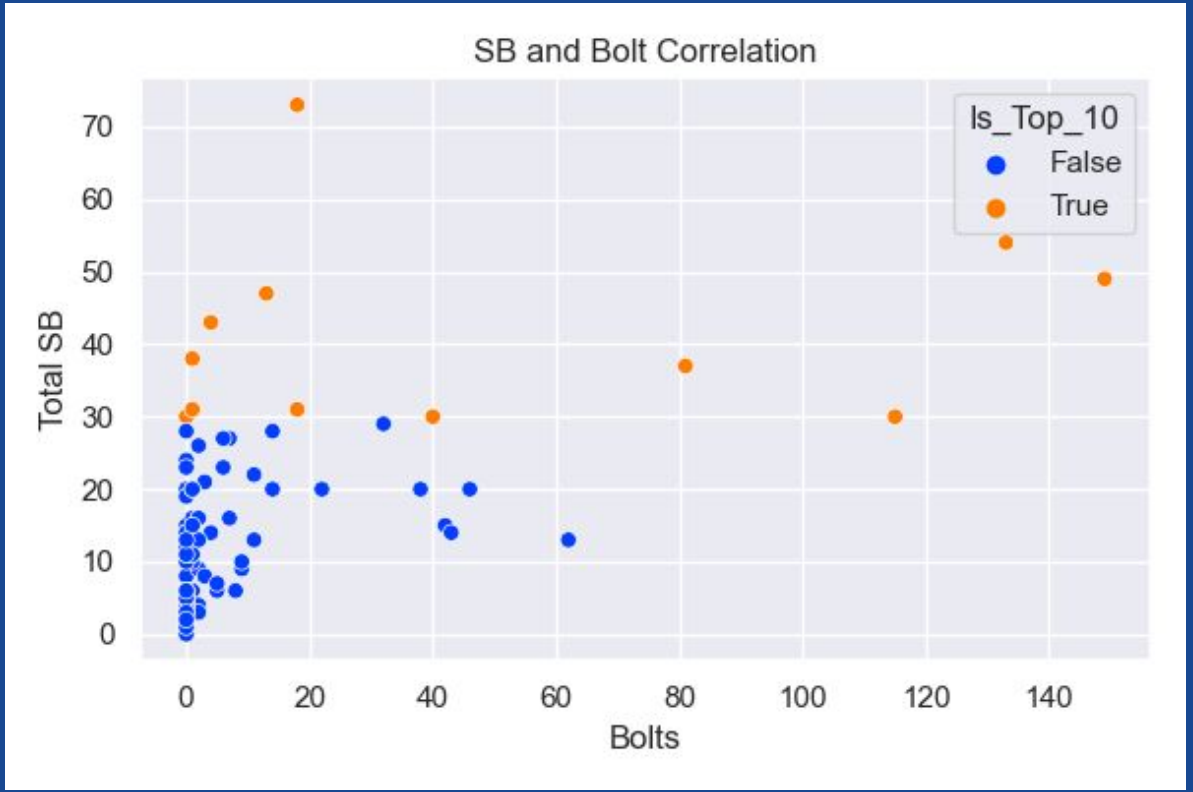
Moderate correlation between Sprint Speed and CS: 0.65



Results

Moderate correlation between SB and Bolt: 0.54

→ Outliers could be forcing a correlation



Recommendations

1. Proceed with our plan to increase SB

2. Increase SB attempts: Players focused on increasing SB must be willing to sacrifice CS

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Next Steps

- Repeat this analysis with a **larger dataset**:

  -Observe SB over all years

  - Compare stats of players with top SB over all years

- How does SB, CS and SB% effect the number of **team wins**?

Thank You

Questions?

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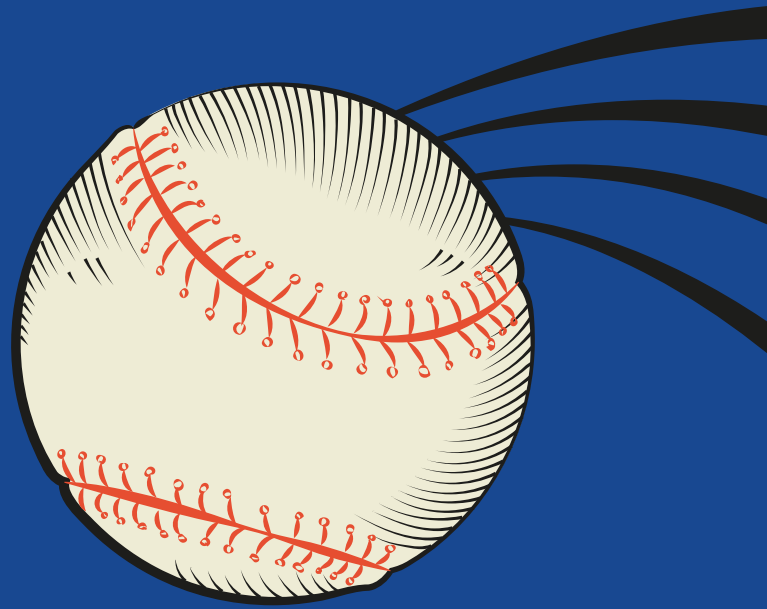
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