**Question and Background**

* Does team-wide variability in various pitching attributes (fastball velocity, release point, extension, pitch mix, vertical and horizontal break) contribute to postseason run-prevention? Does this differ between starters and relievers or righties and lefties?
* It’s common knowledge RHPs are preferred against right-handed hitters, and LHPs against left-handed hitters
  + In a typical seven-game series, a batter might get 20 opportunities at the plate
  + If he’s a righty, he’s likely going to be facing mainly righties, but if given the choice between facing righties with similar deliveries, velocities and pitch arsenals and righties with major differences in all those categories, surely he would choose the former
  + Further, could the advantage of facing southpaws be diminished if each opportunity he gets in those situations comes with different release points and pitch mixes?
* Our intuition would say having as many different “looks” as possible, especially when your opponents will face every arm multiple times over the course of a seven-game series, should limit their ability to get comfortable and, as a result, hurt their offensive potency

**Statistical Methods**

**How will we know we are done?**

**Data**

* Python and R have similar packages for pulling pitch-by-pitch Statcast data from BaseballSavant
* This includes pitch type, velocity, spin, release point, extension, break, pretty much every relevant descriptor of what a pitch “looks like”
  + Aggregate that data by team (likely take every pitcher used in the postseason, and then average out their metrics from the regular season), use the team’s ERA during that postseason as the response
* Goes back to 2017, although there’s probably good reason to throw out the 2020 year just because of COVID and how the postseason format looked way different than usual

**Potential Problems**

* Postseason matchups are imbalanced, and the format has changed in this time frame, so simply facing a better hitting team could weaken the relationship between having variability in your pitchers and success
  + With 7 postseasons and over 70 teams (excluding 2020) hopefully that won’t be an issue