**Sport Analysis for 4 Big Leagues**

Professional sports are a big business in America. The four biggest team sports are MLB, the NFL, the NBA, and the NHL. These leagues combined have revenues totaling over $30 billion. The source of all this revenue is, of course, the fans of the teams in each of these sports leagues. Fans go to games or watch from home or elsewhere to watch their favorite teams, and they want to see them win. They want them to win games, and they want them to win championships. If a team is doing poorly, the fans start to become disinterested in the games. That hurts the team's revenue and the league's as a whole.

To keep the fans interested, these four leagues have enacted different policies intended to level the playing field so that bad teams can improve, giving their fans a reason to keep going to games. Such policies include awarding top draft picks to the teams with the worst records, revenue sharing, salary caps for teams, luxury taxes for teams that exceed the caps, and even revenue sharing so that a few teams dominate the sport, driving away fans of the other teams who see no hope for victory.

We are looking at how each league is managing to keep the sport competitive, so that the race to the playoffs is exciting and at times unpredictable. We examined the disparity in each of these sports between the teams finishing the seasons with the best five records every year to see how big is the gap between the best records and the worst records. We then compared our findings for each sport to see how competitive each sport is compared to each other, and see which sport has the biggest disparity between its best and worst teams for any given year. We determined this by visualizations of the winning percentages for each sport for the seasons from 2000 to 2017, and with a statistical analysis of our data.