

**Group Members:**

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**Problem to solve:**

We are interested in looking at how well certain ultimate frisbee statistics can predict player performance. We intend to compare various statistics' performance when predicting outcomes like plus/minus (positive effect vs negative effect) and average points scored, and compare how models that use DP compare to those that do not.

**Approach:**

We intend to use a Kaggle dataset called "[2024 College Ultimate Championship Statistics](#)", which includes 16 columns of data about each of the players that participated in the 2024 College Ultimate Championship. We want to use gradient descent with differential privacy as we did in In-Class Exercise, week of 10/27/2025 as well as Homework 9 to analyze the effect of differential privacy on prediction accuracy.

In addition to training on DP models directly, we will also use and make a synthetic player data set using DP private marginals. We will do this by using laplace noise on one or two way marginals over selected attributes to satisfy DP. This will provide a different method of using privacy.