

1. Applied Math, 2022
2. Yes.
3. In five years, I hope to be in some industry job doing some kind of data science or finishing grad school.
4. (a) Defense, Shooting and Dribbling are all predictors and the response is whether or not they were drafted.
(b) To find distance: $\sqrt{(x_1 - \hat{x}_1)^2 + (x_2 - \hat{x}_2)^2 + (x_3 - \hat{x}_3)^2}$
 - i. 1
 - ii. $\sqrt{2}$
 - iii. 3
 - iv. $\sqrt{6}$
 - v. $\sqrt{2}$
 - vi. $\sqrt{18}$
 - vii. $\sqrt{5}$
- (c) When $K = 1$, Player 1 is closest, and was not drafted, thus we classify our new player as being not drafted
- (d) When $K = 3$, Players 1, 2, 5 are closest and the majority are drafted, thus our new player is classified as drafted.
- (e) When $K = 5$, Players 1, 2, 4, 5, 7 are closest and the majority are drafted, thus our new player is classified as drafted.