TEAM PSSN

## Exercise 1: Background Work

2017

Winner: Adelaide Crows

Runner Up: Brisbane Lions

Best and Fairest: Erin Phillips

2018

Winner: Western Bulldogs

Runner Up: Brisbane Lions

Best and Fairest: Emma Kearney

## Exercise 2: Explore the data

2017:

Highest average kicks: Erin Phillips (15.5)

2018:

Highest average kicks: Emma Kearney (15.4)

2017: Erin is moderately good at dispatching the ball and she managed to dispatch it 57.5% of the time. A few other players who managed to dispatch 100% of the time are: Kim Mickle and Natalie Plane. The ones who never managed to dispatch the ball are: Pepa Randall and Lou Wotton.

2018: Emma Kearney managed to dispatch it 60.5% of the time. A few other players who managed to dispatch 100% of the time is: Sarah Lampard.The ones who never managed to dispatch the ball are: Kimberley Ebb and Jessica Anderson.

The highest average number of goals by a player in 2017 is Darcy Vescio with an average of 2.0 goals per game.

The highest average number of goals by a player in 2018 is Jess Wuetschner with an average of 0.6 goals per game.

## Exercise 3

1a) There has been a slight increase in the number of goals kicked in 2018, as the average number of goals kicked per season increased from 4.6 to 4.9 from 2017 to 2018. This suggests the games were slightly higher scoring in 2018, however there has been no significant increase in scoring between the two seasons, as the average increased by less than a goal in 2018.

1. The plot shows that there were more players in 2018 who averaged a greater number of goals per game while using the same number of kicks per game as in 2017, which explains the increase in average goals per game in 2018. However, overall, the shape of the plot remained fairly similar in 2018 compared to 2017, as majority of the players averaged less than one goal per game, suggesting no significant increase in scoring in 2018.

2a) Jessica Dal Pos and Alicia Eva

1. (GWS)
2. Jessica Dal Pos 7.4 kicks 0.1 goals Alicia Eva 13.7 kicks 0.1 goals

The data suggests that Jessica Dal Pos scores on average 7.4 kicks a game with 0.1 goals a game, whereas Alicia Eva has a significantly higher average kick rate of 13.4 kicks, but also 0.1 goals per game. As the AFL Best and Fairest votes happen at the end of each game when umpires confer, it does suggest that Eva should have been more remarkable, on average, in terms of kicks, at the end of each match. However, it does not necessarily mean that Eva should have received the votes of Dal Pos, or that there was a mistake. The Best and Fairest awards are not solely based on statistics, nor if they were, on the statistics of goals vs kicks. AFLW is much more complex, and although the focus may be on kicks and goals, there are also many other elements that the game encompasses, such as goal assists, marks, handballs, or beyond the technical, values such as leadership and teamwork.

## Exercise 4

1. The plot does change. Based on the Euclidean distance formula, the plotted points are not discrete variables, but rather the distance between each variable. That is, for each player, we are plotting the similarities of any given statistics, from a 3-D space, onto a 2-D space.For example, if we look at Alicia Eva and Elise O’Dea, in terms of dispatch efficiency, kicks and handballs, they are almost superimposed, implying that they are very similar with regards to these aspects, but in terms of other aspects this may not be so.
2. No, there is not much difference between the teams. They each have quite a range, but that range is reflected similarly across the teams in all the aspects of comparison. This is because teams want a diverse range of players with diverse skills to supplement each other. Because this is a fundamental requirement, hence all teams reflect similarly in terms of differences or similarities between players of different skills.
3. Courtney Gum is “close neighbours” (with regard to all the given variables) with Kara Donnellan of Fremantle, both of whom are MVP nominees. However, at the same time, Adelaide Crows’ MVP Erin Phillips’s closest neighbours were not MVP nominees. Thus, this suggests that similar traits are a factor in consideration of MVP, but not necessarily the sole factor.

## Exercise 5

Based on visual inspection,

2017:

Most Similar Teams are: Fremantle and Collingwood

Most Different Teams are: Carlton and Adelaide Crows

2018:

Most Similar Teams are: Western Bulldogs and Brisbane Lions

Most Different Teams are: Adelaide Crows and Melbourne

Thank you for reading :)