

Supplementary Material for ‘Teaching Computers to See Patterns in Scatterplots with Scagnostics’

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Data dictionaries

AFLW

- *timeOnGroundPercentage*: percentage of the game the player was on the field.
- *goals*: the 6 points a team gets when the kick the ball between the two big posts.
- *behinds*: the 1 point a team gets when they kick the ball between the big post and small post.
- *kicks*: number of kicks done by the player in this game.
- *handballs*: number of handballs does by the player in the game.
- *disposals*: the number kicks and handballs a player has.
- *marks*: total number of marks in the game (the ball travels more than 15m and the player catches it without another player touching it or it hitting the ground).
- *bounces*: the number of times a player bounced the ball in a game. A player must bounce the ball if they travel more than 15m and they can only bounce the ball once.
- *tackles*: Number of tackles performed by the player.
- *contestedPossessions*: the number of disposals a player has under pressure, i.e if a player is getting tackled and the get a handball or kick out of the scuffle.
- *uncontestedPossessions*: the number of disposals a player has under no pressure where they have space and time to get rid of the ball.
- *totalPossessions*: The total number of time the player has the ball.
- *inside50s*: the number of times the player has the ball within the 50m arc around the oponents goals.
- *marksInside50*: the number of marks a player gets within the 50m arc around the oponents goals.
- *contestedMarks*: the number of marks a player has under pressure.
- *hitouts*: this is how many times a player or team taps or punching the ball from a stoppage.
- *onePercenters*: all the things a player can do without registering a disposal. Eg. Spoils (punching the ball to stop someone from marking it), Shepparding (blocking for a teammate), smothering.
- *disposalEfficiency*: a measure of how well a player disposes of the ball. E.g. if a player kicks or handballs to the opposition a lot, they will have a low disposal efficiency percentage.

- *clangers*: this is how many times a player or team dispose of the ball and it results in a turnover to the other team.
- *freesFor*: this player was awarded a free kick.
- *freesAgainst*: this player caused a free kick to be awarded to the other team.
- *dreamTeamPoints*: this is fantasy football scoring points.
- *rebound50s*: how many times the player exits the ball out of their defence 50m arc.
- *goalAssists*: number of times the player gave the pass immediately before the player that scored a goal.
- *goalAccuracy*: percentage ratio of the number of goals kicked to the number of goal attempts.
- *turnovers*: this players disposal caused a turnover (the ball touches the ground and the other team get it).
- *intercepts*: number of times this player intercepts the disposal of the other team.
- *tacklesInside50*: number of tackles performed by this player within their defence 50m arc.
- *shotsAtGoal*: number of total shots at goal for this player (sum of goals, behinds and misses)
- *scoreInvolvements*: number of times the player was involved in a passage of play leading up to a goal.
- *metresGained*: how far a player has been able to advance the ball without turning it over.
- *clearances.centreClearances*: this is the clearance from the centre bounce after a goal or at the start of a quarter
- *clearances.stoppageClearances*: all the clearance from stoppages around the ground
- *clearances.totalClearances*: how many time a player or team clears the ball from a stoppage or from the centre

Black Hole Merger

Its position in the sky (three variables: *ra*, *dec*, *distance*), the time of the event (*time*), the black hole properties (masses *m1* and *m2*; spin related properties *alpha*, *theta_jn*, *chi_tot*, *chi_eff*, *chi_p*), and additional nuisance parameters *psi* (polarisation angle) and *phi_jl* (orbital phase).