Algorithms for 2013

Probability Predictors

Algorithm Name	Short Name	Inputs	Outputs	Details of Algorithm
Head-to-Head (Unadjusted)	H2H_Adj	*Uses data from past 365 days only* **TARGET** Whether or not a wager on the Home team was profitable **REGRESSORS** Risk-Equalising Implicit Probabilities Opponent's Venue Experience in past 12 months Tailored version of MARS Ratings of both teams Interstate Status of the contest Average points differential for both teams in past 16 games in current season	Probability that a head-to-head wager on the Home team will be profitable (constrained to be in the interval 1% to 99%)	Unbiased Conditional Inference Tree. The probability assessments of this algorithm are used to determine the wagers of the Head-to-Head Fund.
Head-to-Head (Adjusted)	H2H_Unadj	Output of the Head-to-Head Unadjusted algorithm and the Bookmaker's Risk-Equalising Implicit Probabilities	Adjusted probability that a head-to-head wager on the Home team will be profitable	In those rare instances where the Head-to-Head Unadjusted algorithm's probability is more than 25% points higher than the TAB Bookmaker's Risk-Equalising Implicit Probability, the Head-to-Head Adjusted Probability is set equal to the Implicit Probability + 25% points.
Line Fund Algorithm	-	*Uses data from past 365 days only* **TARGET** Whether or not a line wager on the Home team was profitable **REGRESSORS** Risk-Equalising Implicit Probabilities Start offered by Home team on line betting Both teams' Venue Experience in past 12 months Tailored version of MARS Ratings of both teams Interstate Status of the contest Average points differential for both teams in past 16 games in current season	Probability that a line wager on the Home team will be profitable (constrained to be in the interval 1% to 99%)	Unbiased Conditional Inference Tree. The probability assessments of this algorithm are used to determine the wagers of the Line Fund.
ProPred	PP	*Uses data from past 365 days only* **TARGET** Whether Home team won or lost (draws are ignored) **REGRESSORS** Log transform of Risk-Equalising Implicit Probabilities Opponent's Venue Experience in past 12 months Tailored version of MARS Ratings of both teams (same version as used by H2H Unadj) Interstate Status of the contest Average points differential for both teams in past 16 games in current season	Probability that the Home team wins (constrained to be in the interval 1% to 99%)	Unbiased Conditional Inference Tree. The MARS Rating System used by ProPred was designed to optimise the algorithm's calibration as a Probability Predictor. It is nonetheless assessed as a Head-to-Head Tipster and as a Probability Predictor.
WinPred	WP	*Uses data from past 365 days only* **TARGET** Whether Home team won or lost (draws are ignored) **REGRESSORS** Log transform of Risk-Equalising Implicit Probabilities Opponent's Venue Experience in past 12 months Tailored version of MARS Ratings of both teams Interstate Status of the contest Average points differential for both teams in past 16 games in current season	Probability that the Home team wins (constrained to be in the interval 1% to 99%)	Unbiased Conditional Inference Tree. The MARS Rating System used by WinPred was designed to optimise the algorithm's ability to predict winners rather than to be a well-calibrated Probability Predictor. It is nonetheless assessed as a Head-to-Head Tipster and as a Probability Predictor.
Bookie - Overround Equalising	Bookie_OE_Prob	*Formula* *Bookie_OE_Prob = Away Team Price / (Home Team Price + Away Team Price)*	Probability that the Home team wins	Derived from the TAB Bookmaker's pre-game head-to-head prices and assumes that the total overround in the market is levied equally on both teams
Bookie - Risk Equalising	Bookie_RE_Prob	*Formula* *Bookie_RE_Prob = 1 / Home Team Price - Total Overround / 2* *where* *Total Overround = 1 / Home Team Price + 1 / Away Team Price - 1*	Probability that the Home team wins	Derived from the TAB Bookmaker's pre-game head-to-head prices and assumes that the total overround in the market is levied so as to protect the Bookmaker against the same size calibration error for both teams
Bookie - Log Probability Score Optimised	Bookie_LPSO_Prob	*Formula* *Bookie_LPSO_Prob = 1 / Home Team Price - 1.0281%*	Probability that the Home team wins	Derived from the TAB Bookmaker's pre-game head-to-head prices and was determined empirically to maximise the predictor's log probability score over seasons 2007 to 2012.

Margin Predictors

Algorithm Name	Short Name	Inputs	Outputs	Details of Algorithm
Bookie Actual	BA	TAB Bookmaker's Risk-Equalising Implicit Probabilities	Predicted Home team victory margin	Algorithm generated using Eureqa. Predicted Margin = 22.3 * ln(Home Team Prob/(1- Home Team Prob))
Bookie 3	B3	TAB Bookmaker's Risk-Equalising Implicit Probabilities	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 3 reflects the complexity of the fitted model. Predicted Margin = 25.722811 * ln(Home Team Prob/(1-Home Team Prob))
Bookie 9	B9	TAB Bookmaker's Risk-Equalising Implicit Probabilities	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 9 reflects the complexity of the fitted model. Predicted Margin = 2.2205129 + 17.729506 * ln(Home Team Prob/(1-Home Team Prob)) + 2*Home Team Prob
ProPred 3	PP3	Probability assessments from the ProPred algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 3 reflects the complexity of the fitted model. Predicted Margin = 17.416363 * ln(Home Team Prob/(1-Home Team Prob))
ProPred 7	PP7	Probability assessments from the ProPred algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 7 reflects the complexity of the fitted model. Predicted Margin = 14.505932 * ln(Home Team Prob/(1-Home Team Prob)) + ln(Home Team Prob/(1-Home Team Prob))^2
Win Pred 3	W3	Probability assessments from the WinPred algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 3 reflects the complexity of the fitted model. Predicted Margin = 15.455485 * ln(Home Team Prob/(1-Home Team Prob))
Win Pred 7	W7	Probability assessments from the WinPred algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 7 reflects the complexity of the fitted model. Predicted Margin = -84.369179*TANH(-0.20401368 * ln(Home Team Prob/(1-Home Team Prob))
Head-to-Head Unadj 3	HU3	Probability assessments from the Head-to-Head Unadjusted algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 3 reflects the complexity of the fitted model. Predicted Margin = 14.126766 * ln(Home Team Prob/(1-Home Team Prob))
Head-to-Head Unadj 10	HU10	Probability assessments from the Head-to-Head Unadjusted algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 10 reflects the complexity of the fitted model. Predicted Margin = 14.1657 * ln(Home Team Prob/(1-Home Team Prob)) + if(ABS(0.24989337 + ln(Home Team Prob/(1-Home Team Prob)) < 0.001, 0, 0.059741676/(0.24989337 + ln(Home Team Prob/(1-Home Team Prob))))
Head-to-Head Adj 3	HA3	Probability assessments from the Head-to-Head Adjusted algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 3 reflects the complexity of the fitted model. Predicted Margin = 14.475839 * ln(Home Team Prob/(1-Home Team Prob))
Head-to-Head Adj 7	HA7	Probability assessments from the Head-to-Head Adjusted algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 7 reflects the complexity of the fitted model. Predicted Margin = 13.744053 * ln(Home Team Prob/(1-Home Team Prob))+ 3.3152962 * Home Team Prob
Combo 7	C7	Probability assessments from the TAB Bookmaker (Risk-Equalising) and the Head-to-Head Unadjusted algorithm	Predicted Home team victory margin	Algorithm generated using Eureqa. The number 7 reflects the complexity of the fitted model. Predicted Margin = 18.948893 * ln(Bookie Home Team Prob/(1-Bookie Home Team Prob)) + ln(H2H Unadj Home Team Prob/(1-H2H Unadj Home Team Prob))^2
Combo Neural Net 1	CN1	Probability assessments from the TAB Bookmaker (Risk-Equalising), ProPred, WinPred and the Head-to-Head Adjusted and Unadjusted algorithms	Predicted Home team victory margin	Neural network
Combo Neural Net 2	CN2	TAB Bookmaker Prices for both teams Interstate Status of the contest MARS Ratings of both teams	Predicted Home team victory margin	Neural network
Bookie - LPSO	Bookie_LPSO_Margin	TAB Bookmaker Prices for both teams	Predicted Home team victory margin	Algorithm generated using Eureqa. Predicted Margin = 19.83089 x (ln(Bookie_LPSO_Prob/(1 - Bookie_LPSO_Prob))
RSMP - Simple	-	TAB Bookmaker Prices for both teams Interstate Status of the contest MARS Ratings of both teams	Predicted Home team victory margin	Simple average of 11 Really Simple Margin Predictors, each based on a single input derived either from the TAB Bookmaker prices or from MARS Ratings
RSMP - Weighted	-	TAB Bookmaker Prices for both teams Interstate Status of the contest MARS Ratings of both teams	Predicted Home team victory margin	Weighted average of 6 of the 11 Really Simple Margin Predictors. Weights are rounded versions of optimal weights derived using data from the 2007 to 2012 seasons

Heuristic Tipsters

Algorithm Name	Short Name	Inputs	Outputs	Details of Algorithm
Bookie Knows Best	BKB	TAB Bookmaker Prices for both teams	Winning team	Selects the TAB Bookmaker Favourite unless both teams are equal favourites in which case it selects the team higher on the ladder
Consult The Ladder	CTL	Competition ladder	Winning team	Selects the team that is higher on the competition ladder at the end of the previous round. For the first round of the season it uses the ladder from the home-and-away portion of the previous season
Home Sweet Home	HSH	Designated Home team	Winning team	Selects the AFL designated Home team for the contest
Shadow	Sha	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that it has tipped correctly most recently. See PDF for details.
Silhouette	Sil	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that it has tipped correctly more often during the current season. See PDF for details.
Easily Impressed I	EI I	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that won by the larger margin most recently. See PDF for details.
Easily Impressed II	EI II	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that it has tipped correctly most recently. See PDF for details.
Short-Term Memory I	STM I	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that won most recently. See PDF for details.
Short-Term Memory II	STM II	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that it has tipped correctly most recently. See PDF for details.
Ride Your Luck	RYL	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team with which it has had the longer successful tipping streak. See PDF for details.
Follow The Streak	FTS	Own previous tips and the previous game results for the current season	Winning team	Prefers to tip the team that has the longer winning streak. See PDF for details.

For details about the Heuristic Tipsters, download this PDF.