mean\_elo = 1500

elo\_width = 400

k\_factor = 32

train\_start\_year = 2012

predict\_start\_year = 2013

end\_year = 2017

elo\_type = 'hpp' # standard elo 'std' or the proposed historical pairwise performance Elo method 'hpp'

optimize = 'Y' # 'Y' or 'N' - whether or not to optimize the alpha and/or beta model parameters based on log loss using scipy minimize

class\_to\_combine\_draws\_with = 'H' # or 'H' or 'N' ('N' means don't combine with draws - i.e., have three class problem - it is not currently finished)

drop\_draws = 'N'

init\_beta = 100 # will always be zero if elo\_type is std

init\_alpha = 100

regress\_towards\_mean = 'Y' # or 'N'

k\_factor\_type = 'goals' # fixed as per the k\_factor value set above, or goals-based k-factor, which multiplies K by G (see 'Number of goals - Obtaining the G value' https://footballdatabase.com/methodology.php)

league\_country = 'all'

final\_simplex: (array([[178.56412209, 7.20778612],

[178.56413427, 7.20770022],

[178.5641875 , 7.20780268]]), array([0.55004762, 0.55004762, 0.55004762]))

fun: 0.5500476177989692

message: 'Optimization terminated successfully.'

nfev: 106

nit: 56

status: 0

success: True

x: array([178.56412209, 7.20778612])

Predicting...

Confusion matrix:

0 1

0 463 1936

1 293 5594

precision recall f1-score support

away win 0.61 0.19 0.29 2399

home win/draw 0.74 0.95 0.83 5887

accuracy 0.73 8286

macro avg 0.68 0.57 0.56 8286

weighted avg 0.71 0.73 0.68 8286

mean\_elo = 1500

elo\_width = 400

k\_factor = 32

train\_start\_year = 2012

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elo\_type = 'hpp' # standard elo 'std' or the proposed historical pairwise performance Elo method 'hpp'

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league\_country = 'all'

Confusion matrix:

0 1

0 910 1489

1 941 4946

precision recall f1-score support

away win 0.49 0.38 0.43 2399

home win/draw 0.77 0.84 0.80 5887

accuracy 0.71 8286

macro avg 0.63 0.61 0.62 8286

weighted avg 0.69 0.71 0.69 8286