# Predicting NHL Face-Off Win Percentage

=== Run information ===

Scheme: weka.classifiers.functions.LinearRegression -S 0 -R 1.0E-8 -num-decimal-places 4

Relation: AHL\_NHL\_BN\_norm-weka.filters.unsupervised.attribute.Remove-R2-10,12,17-20

Instances: 909

Attributes: 24

AHL\_GP

AHL\_passes

AHL\_ze\_controlled\_entry

AHL\_ze\_uncontrolled\_entry

AHL\_ze\_controlled\_exit

AHL\_ze\_uncontrolled\_exit

NHL\_GP

NHL\_G

NHL\_A

NHL\_P

NHL\_PlusMinus

NHL\_PIM

NHL\_PointPerGame

NHL\_PPG

NHL\_PPP

NHL\_SHG

NHL\_SHP

NHL\_GWG

NHL\_OTG

NHL\_S

NHL\_ShootingPercentage

NHL\_TOIPerGame\_sec

NHL\_ShiftsPerGame

NHL\_FaceoffWinPercentage

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Linear Regression Model

NHL\_FaceoffWinPercentage =

0.2157 \* AHL\_GP +

-0.4778 \* AHL\_passes +

0.5081 \* AHL\_ze\_controlled\_entry +

-0.4779 \* AHL\_ze\_uncontrolled\_entry +

0.1888 \* AHL\_ze\_uncontrolled\_exit +

0.2407 \* NHL\_GP +

-0.5068 \* NHL\_TOIPerGame\_sec +

0.5624 \* NHL\_ShiftsPerGame +

0.1544

Time taken to build model: 0.17 seconds

=== Cross-validation ===

=== Summary ===

Correlation coefficient 0.4479

Mean absolute error 0.1972

Root mean squared error 0.2515

Relative absolute error 79.5504 %

Root relative squared error 89.3189 %

Total Number of Instances 909

# Predicting NHL Shots

=== Run information ===

Scheme: weka.classifiers.functions.LinearRegression -S 0 -R 1.0E-8 -num-decimal-places 4

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Instances: 909

Attributes: 24

AHL\_GP

AHL\_passes

AHL\_ze\_controlled\_entry

AHL\_ze\_uncontrolled\_entry

AHL\_ze\_controlled\_exit

AHL\_ze\_uncontrolled\_exit

NHL\_GP

NHL\_G

NHL\_A

NHL\_P

NHL\_PlusMinus

NHL\_PIM

NHL\_PointPerGame

NHL\_PPG

NHL\_PPP

NHL\_SHG

NHL\_SHP

NHL\_GWG

NHL\_OTG

NHL\_S

NHL\_ShootingPercentage

NHL\_TOIPerGame\_sec

NHL\_ShiftsPerGame

NHL\_FaceoffWinPercentage

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Linear Regression Model

NHL\_S =

0.0124 \* AHL\_GP +

-0.0267 \* AHL\_passes +

-0.0177 \* AHL\_ze\_controlled\_entry +

0.0375 \* AHL\_ze\_uncontrolled\_entry +

0.0213 \* AHL\_ze\_controlled\_exit +

-0.0542 \* AHL\_ze\_uncontrolled\_exit +

0.2791 \* NHL\_GP +

0.9711 \* NHL\_G +

0.8412 \* NHL\_A +

-0.9921 \* NHL\_P +

-0.0365 \* NHL\_PlusMinus +

-0.134 \* NHL\_PIM +

-0.0199 \* NHL\_PointPerGame +

0.1395 \* NHL\_PPP +

0.1476 \* NHL\_SHG +

-0.0666 \* NHL\_SHP +

-0.0409 \* NHL\_GWG +

0.0455 \* NHL\_OTG +

-0.0556 \* NHL\_ShootingPercentage +

0.0829 \* NHL\_TOIPerGame\_sec +

-0.0349 \* NHL\_ShiftsPerGame +

0.0081

Time taken to build model: 0.01 seconds

=== Cross-validation ===

=== Summary ===

Correlation coefficient 0.9673

Mean absolute error 0.0245

Root mean squared error 0.0384

Relative absolute error 22.8017 %

Root relative squared error 25.3221 %

Total Number of Instances 909

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Instances: 909

Attributes: 24

AHL\_GP

AHL\_passes

AHL\_ze\_controlled\_entry

AHL\_ze\_uncontrolled\_entry

AHL\_ze\_controlled\_exit

AHL\_ze\_uncontrolled\_exit

NHL\_GP

NHL\_G

NHL\_A

NHL\_P

NHL\_PlusMinus

NHL\_PIM

NHL\_PointPerGame

NHL\_PPG

NHL\_PPP

NHL\_SHG

NHL\_SHP

NHL\_GWG

NHL\_OTG

NHL\_S

NHL\_ShootingPercentage

NHL\_TOIPerGame\_sec

NHL\_ShiftsPerGame

NHL\_FaceoffWinPercentage

Test mode: 10-fold cross-validation

# Predicting TOI\_PerGame

=== Classifier model (full training set) ===

Linear Regression Model

NHL\_TOIPerGame\_sec =

-0.031 \* AHL\_GP +

0.0571 \* AHL\_passes +

0.0425 \* AHL\_ze\_controlled\_exit +

-0.0254 \* NHL\_GP +

-0.9922 \* NHL\_G +

-0.9846 \* NHL\_A +

1.7038 \* NHL\_P +

0.0309 \* NHL\_PointPerGame +

0.0714 \* NHL\_PPP +

0.0954 \* NHL\_SHG +

-0.1196 \* NHL\_SHP +

-0.0343 \* NHL\_OTG +

0.1546 \* NHL\_S +

1.0506 \* NHL\_ShiftsPerGame +

-0.0195 \* NHL\_FaceoffWinPercentage +

0.0012

Time taken to build model: 0.01 seconds

=== Cross-validation ===

=== Summary ===

Correlation coefficient 0.9585

Mean absolute error 0.039

Root mean squared error 0.0517

Relative absolute error 26.6549 %

Root relative squared error 28.4758 %

Total Number of Instances 909