Predicting NHL Wins

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galvanize

Why Predict NHL Wins?

- Because hockey is the best...

  but my team is not

- Advanced analytics are

  not used in the NHL

Data

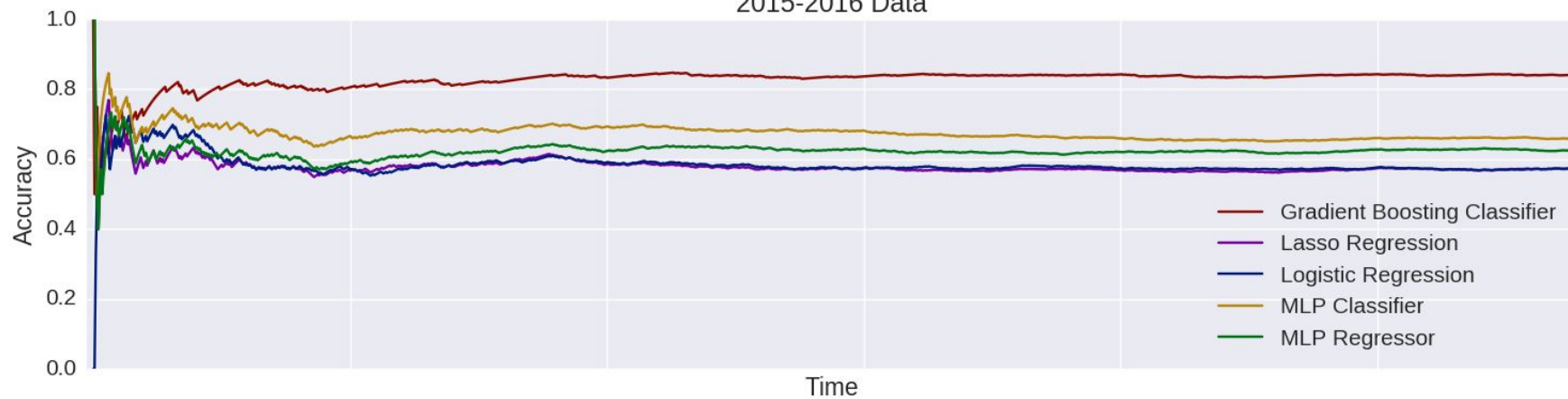|	Home Team	Away Team	Date	Home Team Win	Goal Spread (Home)	Home Team Stats	Away Team Stats
1	MIN	CGY	2016-04-09	0	- 1	From past n games	
2	MTL	TBL	2016-04-09	1	+ 3	• Spread • Wins • Goals • Shots • PP% • FOW% • PIM • Hits	• Blocked Shots • Tkwys • Gvwys • Save% • Shot% • PDO • Corsi
3	NJD	TOR	2016-04-09	1	+ 4		
4	NYI	BUF	2016-04-09	0	- 1		
5	NYR	DET	2016-04-09	1	+ 1		

Data Complexity

- 2 games, 5 games, 10 games, or 15 games?

- Look at team stats separately, or as a ratio?

- Predict Win/Loss or Goal Spread?

- Which variables to keep?

- Train on games from current season or last season?

- Which model is best?

2015-2016 Data

2016-2017 Data

Optimal Model

MLP Regressor

60% accuracy

- Multilayer Perceptron Regressor
- Supervised Artificial Neural Network
  - Advantages: capability to learn non-linear models
  - Disadvantages: highly sensitive, lots of parameters

Home Team	Away Team	Predicted	Actual
ANA	EDM		
CAR	SJS		
CBJ	WSH		
COL	LAK		
DAL	NJD		
DET	TBL		
MIN	CGY		
MTL	FLA		
PHI	OTT		
STL	BUF		
TOR	NSH		
VAN	NYR		
WPG	CHI		

Predictions: 11/16/2016

Home Team	Away Team	Predicted	Actual
CGY	ARI		
WSH	PIT		

Home Team	Away Team	Predicted	Actual
ANA	NJD		
BUF	TBL		
DAL	COL		
LAK	EDM		
MIN	BOS		
OTT	NSH		
PHI	WPG		
STL	SJS		
TOR	FLA		
VAN	ARI		

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