

## Schuckers' paper vs. Wilson's paper

### Objective

Schuckers(Draft by Numbers)

To predict drafted players' performance(TOI & GP of first 7 years) in NHL

Wilson's(Mining NHL Draft Data)

- 1.Predict portion of drafted players who can play more than 1 or 160 career GP;
- 2.Predict whether a drafted player can play more than 1 or 160 career GP
- 3.Predict a player's TOI of first 7 seasons in NHL

## Data

Schuckers(Draft by Numbers)

*Draft Year:* 1998-2007

*Response Variables:* TOI & GP within the first 7 years in NHL

*Metrics:* heights, weights, points per game, goals against average, rankings from the NHL's Central Scouting Service (CSS,cescin)

Wilson's(Mining NHL Draft Data)

*Draft Year:* 1998-2013(mostly 1998-2011)

*Response Variable:* GP

*Metrics:* TOI for first 4 seasons,overall pick, age, position

## Model

Schuckers(Draft by Numbers)

*Poisson Generalized Additive Model :*  
TOI/GP= demographic predictor+ cescin (CSS ranking) + function of position+ function of league  
*\*\* ( fit by R gam package)*

Baseline: GP/TOI=cescin(CSS ranking)

Wilson's(Mining NHL Draft Data)

Generalized Linear Regression, ANN, SVM, Voting model

# Results

Schuckers(Draft by Numbers)

Table 4: Comparison of Rank Correlation Magnitude with NHL Performance  
Among Drafted Players

Training Data NHL Draft Years	Out of Sample Draft Year	NHL Performance Metric	NHL Draft Order	Draft by Numbers
1998, 1999, 2000	2001	TOI	0.366	0.603
1998, 1999, 2000	2001	GP	0.383	0.532
1998, 1999, 2000	2002	TOI	0.282	0.587
1998, 1999, 2000	2002	GP	0.348	0.536
2004, 2005, 2006	2007	TOI	0.403	0.642
2004, 2005, 2006	2007	GP	0.401	0.694
2004, 2005, 2006	2008	TOI	0.398	0.685
2004, 2005, 2006	2008	GP	0.401	0.708

Wilson's(Mining NHL Draft Data)

		true		
object	0	1		Row Sum
0	2372	194		2566
1	98	406		504
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col sum	2470	600		3070
attr(,"error")				
[1] 0.09511401				

FIGURE 4.14: Confusion Matrix for the Voting Model