


How to tell if a hockey player performs well (enough)

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A circular inset image showing an ice hockey game. A player in a blue and white jersey with the number 88 is on the left, leaning forward with his stick on the ice. A player in a white and black striped jersey is in the center, also leaning forward. A referee in a black and white striped shirt is on the right, watching the play. The scene is set on an ice rink with a red line visible. The background of the entire image is a light blue, textured surface.

WHAT CAN WE DO?



Player

Season

Team

Pos

GP

G↓

A↓

P↓

+/-

PIM

THERE ARE SOME SIMPLE STATISTICS

1	Connor McDavid	2017-18	EDM	C	82	41	67	108	20	26
2	Claude Giroux	2017-18	PHI	C	82	34	68	102	28	20
3	Nikita Kucherov	2017-18	TBL	R	80	39	61	100	15	42
4	Evgeni Malkin	2017-18	PIT	C	78	42	56	98	16	87
5	Nathan MacKinnon	2017-18	COL	C	71	39	58	97	11	55
6	Taylor Hall	2017-18	NJD	L	82	27	54	93	14	34
7	Anze Kopitar	2017-18	ANA	C	82	35	57	92	21	20
8	Phil Kessel	2017-18	PIT	R	82	34	58	92	-4	36
9	Blake Wheeler	2017-18	WPG	R	81	23	68	91	13	52
10	Sidney Crosby	2017-18	PIT	C	82	29	60	89	0	46
11	Alex Ovechkin	2017-18	WSH	L	82	49	38	87	3	32
12	Steven Stamkos	2017-18	TBL	C	78	27	59	86	18	72
13	Brad Marchand	2017-18	BOS	L	68	34	51	85	25	63
14	Mathew Barzal	2017-18	NYI	C	82	22	63	85	1	30
15	Jakub Voracek	2017-18	PHI	R	82	20	65	85	10	50



Player

Season

Team

Pos

GP

G↓

A↓

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+/-

PIM

1	Connor McDavid	2017-18	EDM	C	82	41	67	108	20	26
2	Claude Giroux	2017-18	PHI	C	82	34	68	102	28	20
3	Nikita Kucherov	2017-18	TBL	R	80	39	61	100	15	42
4	Evgeni Malkin	2017-18	PIT	C	78	42	56	98	16	87
5	Nathan MacKinnon	2017-18	COL	C	82	38	58	97	11	55
6	Taylor Hall	2017-18	WPG	L	78	33	54	93	14	34
7	Anze Kopitar	2017-18	LAK	C	82	35	57	92	21	20
8	Phil Kessel	2017-18	PIT	R	82	34	58	92	-4	36
9	Blake Wheeler	2017-18	WPG	R	81	23	68	91	13	52
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15	Jakub Voracek	2017-18	PHI	R	82	20	65	85	10	50

- Simplicity is accurate

- Simplicity is accepted

- Simplicity is nice



Player

Season

Team

Pos

GP

G↓

A↓

P↓

+/-

PIM

SO WHAT'S THE PROBLEM?

1	Connor McDavid	2017-18	EDM	C	82	41	67	108	20	26
2	Claude Giroux	2017-18	PHI	C	82	34	68	102	28	20
3	Nikita Kucherov	2017-18	TBL	R	80	39	61	100	15	42
4	Evgeni Malkin	2017-18	PIT	C	78	42	56	98	16	87
5	Nathan MacKinnon	2017-18	COL	C	74	39	53	97	11	55
6	Taylor Hall	2017-18	EDM	L	76	39	51	93	14	34
7	Anze Kopitar	2017-18	VAN	C	73	35	57	92	21	20
8	Phil Kessel	2017-18	PIT	R	82	34	58	92	-4	36
9	Blake Wheeler	2017-18	WPG	R	81	23	68	91	13	52
10	Sidney Crosby	2017-18	PIT	C	82	29	60	89	0	46
11	Alex Ovechkin	2017-18	WSH	L	82	49	38	87	3	32
12	Steven Stamkos	2017-18	TBL	C	78	27	59	86	18	72
13	Brad Marchand	2017-18	BOS	L	68	34	51	85	25	63
14	Mathew Barzal	2017-18	NYI	C	82	22	63	85	1	30
15	Jakub Voracek	2017-18	PHI	R	82	20	65	85	10	50

FENWICK

SHOTS
ON
TARGET

MISSED
SHOTS

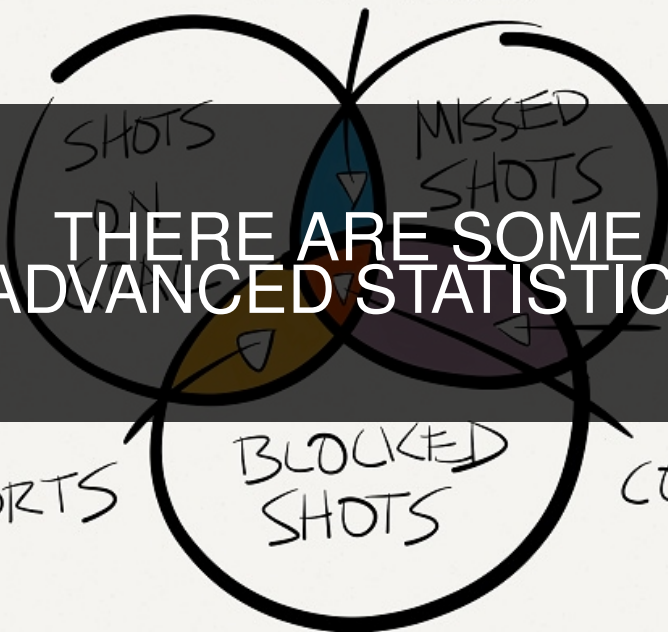
THERE ARE SOME
ADVANCED STATISTICS

ROHLIN

TORTS

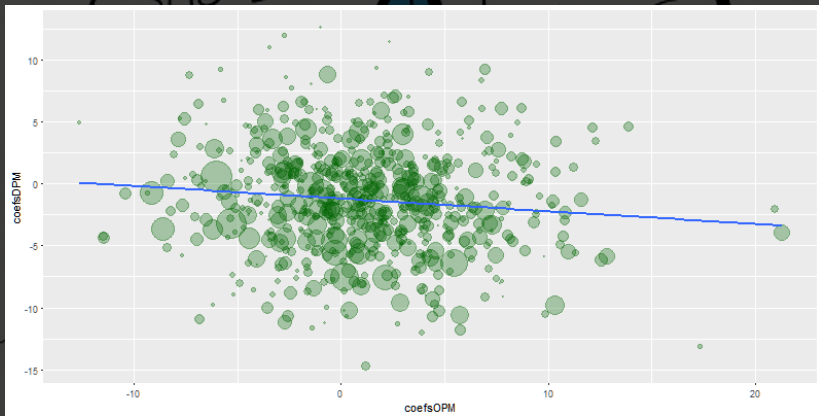
BLOCKED
SHOTS

CORSI



FENWICK

There are some applied models

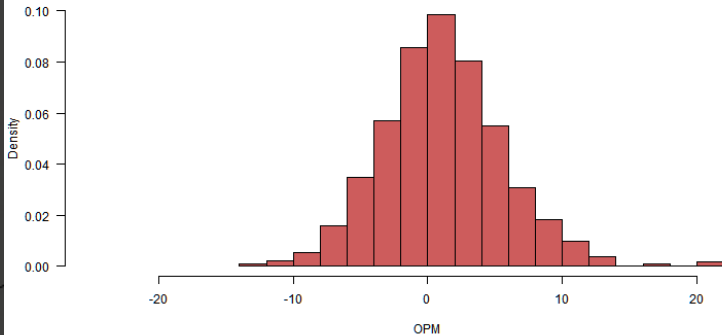


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FENWICK

I have verified some models

Histogram OPM, season 2011/2012

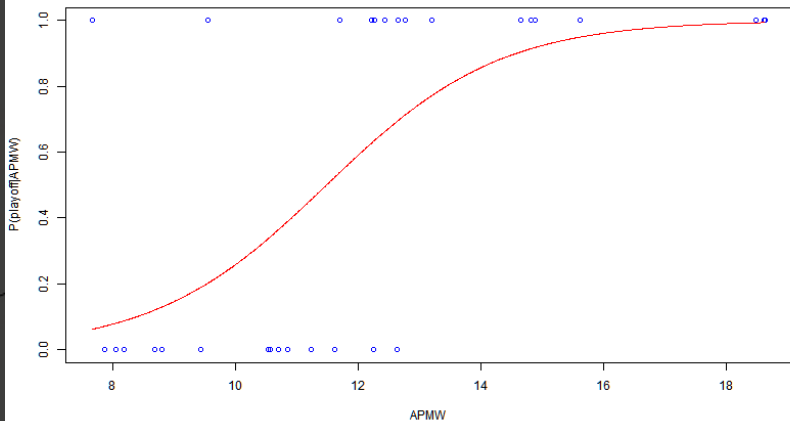


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FENWICK

I have back-tested some models

Real x Fitted values, logistic model, 2011/2012



LIN

The background features a large, stylized letter 'R' in a light blue color. The 'R' is composed of a vertical stem on the left and a curved top and bottom arm on the right. A dark blue horizontal bar is positioned across the middle of the 'R', containing the text 'HOW IS R INVOLVED?'. The overall design is clean and modern, with a focus on the R logo.

HOW IS R INVOLVED?

VISITOR

HOME



6



Play By Play

Saturday, March 3, 2018
Attendance 19,092 at Amalie Arena
Start 1:08 EST; End 3:57 EST
Game 1000
Final



7



PHILADELPHIA FLYERS
Game 65 Away Game 33

TAMPA BAY LIGHTNING
Game 66 Home Game 30

#	Per Str	Time: Elapsed Game	Event	Description	PHI On Ice	T.B On Ice
33	1 SH	6:32 13:28	TAKE	T.B TAKEAWAY - #10 MILLER, Def. Zone	14 19 28 93 53 34	10 21 5 77 88
34	1 PP	6:57 13:03	SHOT	PHI ONGOAL - #28 GIROUX, Wrist, Off. Zone, 52 ft.	14 19 28 93 53 34	17 24 5 77 88
35	1 PP	7:08 12:52	GOAL	PHI #19 PATRICK(10), Tip-In, Off. Zone, 15 ft. Assists: #28 GIROUX(54); #93 VORACEK(57)	14 19 28 93 53 34	17 24 5 77 88
36	1 EV	7:08 12:52	FAC	T.B won Neu. Zone - PHI #5 FILPPULA vs TB #91 STAMKOS	15 40 51 8 47 34	17 91 86 5 98 88
38	1 EV	7:48 12:24	STOP	ICING	14 19 28 93 53 34	17 24 5 77 88
39	1 EV	7:36 12:24	FAC	PHI won Def. Zone - PHI #28 GIROUX vs TB #21 PARSONS	11 14 28 3 23 34	10 21 37 6 77 88
40	1 EV	7:48 12:12	TAKE	T.B TAKEAWAY - #21 PARSONS, Off. Zone, 52 ft.	11 14 28 3 23 34	10 21 37 6 77 88
41	1 EV	7:54 12:06	PENL	PHI #28 GIROUX Slashing(2 min), Off. Zone Drawn By: T.B #37 GOURDE	11 14 28 3 23 34	10 21 37 6 77 88
42	1 SH	7:54 12:06	FAC	PHI won Def. Zone - PHI #14 COUTURIER vs TB #91 STAMKOS	14 12 3 9 34	10 17 91 86 77 88
43	1 PP	8:16 11:44	GOAL	T.B #91 STAMKOS(26), Slap, Off. Zone, 41 ft. Assists: #77 HEDMAN(37); #86 KUCHEROV(50)	14 12 3 9 34	10 17 91 86 77 88
44	1 EV	8:16 11:44	FAC	PHI won Neu. Zone - PHI #19 PATRICK vs TB #9 JOHNSON	19 93 54 8 47 34	9 89 73 55 62 88
45	1 EV	9:25 10:35	BLOCK	T.B #24 CALLAHAN BLOCKED BY PHI #3 GUDAS, Wrist, Def. Zone	12 20 21 3 23 34	71 24 14 6 98 88
46	1 EV	9:35 10:25	GIVE	PHI GIVEAWAY - #21 LAUGHTON, Neu. Zone	12 20 21 9 53 34	71 24 14 6 98 88
47	1 EV	10:23 9:37	MISS	PHI #47 MACDONALD, Slap, Wide of Net, Off. Zone, 60 ft.	15 40 51 8 47 34	10 21 37 5 77 88
48	1	10:36 9:24	STOP	ICING	15 40 51 8 47 34	17 91 86 55 62 88
49	1 EV	10:36 9:24	FAC	PHI won Def. Zone - PHI #51 FILPPULA vs T.B #17 KILLORN	15 40 51 8 47 34	17 91 86 55 62 88
50	1 EV	10:50 9:10	HIT	PHI #15 LEHTERA HIT T.B #86 KUCHEROV, Def. Zone	15 40 51 8 47 34	17 91 86 55 62 88
51	1	11:03 8:57	STOP	OFFSIDE,TV TIMEOUT	15 40 51 9 53 34	17 91 86 55 62 88
52	1 EV	11:03 8:57	FAC	T.B won Neu. Zone - PHI #19 PATRICK vs TB #9 JOHNSON	19 93 54 9 53 34	9 89 73 55 62 88

HOW DO WE PROCESS DATA?

nhlscrapr: Compiling the NHL Real Time Scoring System Database for easy use in R

Compiling the NHL Real Time Scoring System Database for easy use in R.

Version: 1.8.1

Depends: R ($\geq 2.15.0$)

Imports: [RCurl](#), [rjson](#), [biglm](#), [bitops](#)

Published: 2017-03-08

Author: A.C. Thomas, Samuel L. Ventura

Maintainer: ORPHANED

License: [GPL \(\$\geq 3\$ \)](#)

NeedsCompilation: yes

CRAN checks: [nhlscrapr r-stubs](#)

NHLSCRAPR!

Downloads:

Reference manual: [nhlscrapr.pdf](#)

Package source: [nhlscrapr_1.8.1.tar.gz](#)

Windows binaries: r-devel: [nhlscrapr_1.8.1.zip](#), r-release: [nhlscrapr_1.8.1.zip](#), r-oldrel: [nhlscrapr_1.8.1.zip](#)

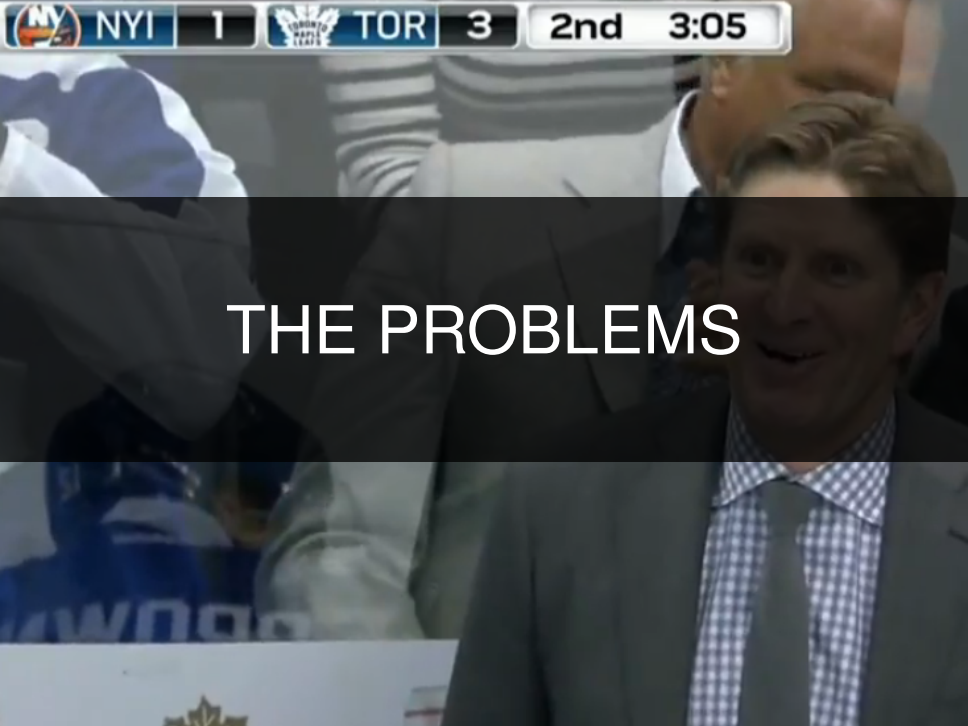
OS X binaries: r-release: [nhlscrapr_1.8.1.tgz](#), r-oldrel: [nhlscrapr_1.8.1.tgz](#)

Old sources: [nhlscrapr archive](#)



HOW DOES THE FUTURE
LOOK LIKE?

THE PROBLEMS





THANK YOU