

Final-Report

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3/23/2021

First Player Value Logistic Modeling Results

Regressors	Misclass Rate	AUC
WAR	14.0%	0.915
Standard Statistics	12.3%	0.899
Combined	10.4%	0.926

Second Player Value Logistic Modeling Results

Standardized by Retirement Decade

Regressors	Misclass Rate	AUC
WAR	11.5%	0.935
Standard Statistics	13.1%	0.892
Combined	11.5%	0.933

Third Player Value Logistic Modeling Results

Standardized with Retirement Decade Interactions

Regressors	Misclass Rate	AUC
WAR	11.0%	0.941
Standard Statistics	13.5%	0.895
Combined	12.3%	0.937

WAR vs. Induction Status by Classification Accuracy

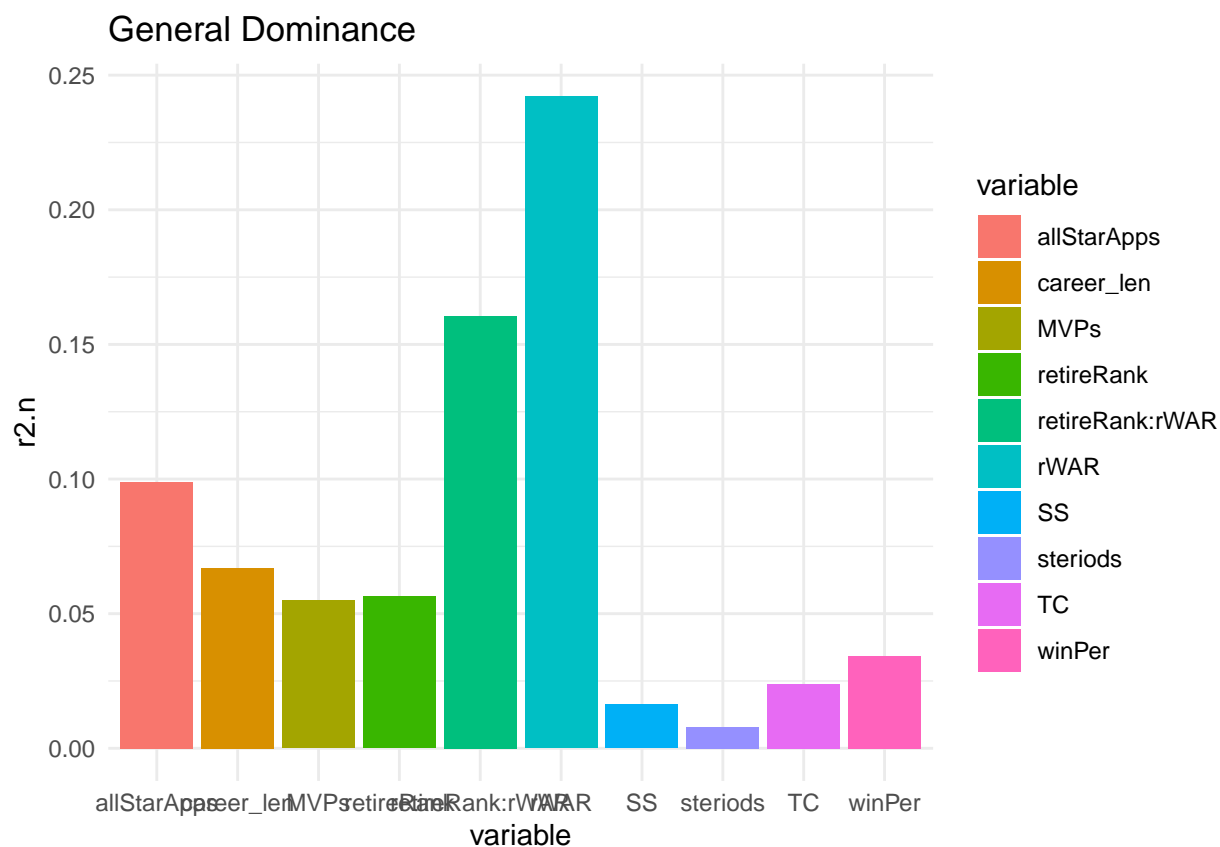


Improved Logistic Modeling Results

Model	Misclass Rate	AUC
Initial	11.0%	0.941
Modified	8.8%	0.959

WAR vs. Induction Status by Improved Classification Accuracy





```
## Setting levels: control = FALSE, case = TRUE
```

```
## Setting direction: controls < cases
```

##	tpp	fpp	thresholds
## 1	100.000000	100.0000000	-Inf
## 2	100.000000	99.7245179	1.151871e-11
## 3	100.000000	99.4490358	3.165796e-11
## 4	100.000000	99.1735537	1.297830e-10
## 5	100.000000	98.8980716	2.526162e-10
## 6	100.000000	98.6225895	1.984691e-09
## 7	100.000000	98.3471074	4.453713e-09
## 8	100.000000	98.0716253	5.866303e-08
## 9	100.000000	97.7961433	7.554255e-07
## 10	100.000000	97.5206612	1.927163e-06
## 11	100.000000	97.2451791	2.885026e-06
## 12	100.000000	96.9696970	3.632164e-06
## 13	100.000000	96.6942149	4.842110e-06
## 14	100.000000	96.4187328	6.572586e-06
## 15	100.000000	96.1432507	8.352395e-06
## 16	100.000000	95.8677686	1.057602e-05
## 17	100.000000	95.5922865	1.403818e-05
## 18	100.000000	95.3168044	1.643526e-05
## 19	100.000000	95.0413223	1.699112e-05
## 20	100.000000	94.7658402	1.786195e-05

## 21	100.000000	94.4903581	2.698840e-05
## 22	100.000000	94.2148760	3.587993e-05
## 23	100.000000	93.9393939	3.687673e-05
## 24	100.000000	93.6639118	3.870037e-05
## 25	100.000000	93.3884298	4.267314e-05
## 26	100.000000	93.1129477	4.627355e-05
## 27	100.000000	92.8374656	4.710074e-05
## 28	100.000000	92.5619835	4.957970e-05
## 29	100.000000	92.2865014	5.542199e-05
## 30	100.000000	92.0110193	5.962928e-05
## 31	100.000000	91.7355372	7.231369e-05
## 32	100.000000	91.4600551	8.942583e-05
## 33	100.000000	91.1845730	1.019129e-04
## 34	100.000000	90.9090909	1.113847e-04
## 35	100.000000	90.6336088	1.160720e-04
## 36	100.000000	90.3581267	1.210564e-04
## 37	100.000000	90.0826446	1.237260e-04
## 38	100.000000	89.8071625	1.289511e-04
## 39	100.000000	89.5316804	1.340089e-04
## 40	100.000000	89.2561983	1.428490e-04
## 41	100.000000	88.9807163	1.594413e-04
## 42	100.000000	88.7052342	1.715161e-04
## 43	100.000000	88.4297521	1.794459e-04
## 44	100.000000	88.1542700	1.858815e-04
## 45	100.000000	87.8787879	1.934120e-04
## 46	100.000000	87.6033058	1.986313e-04
## 47	100.000000	87.3278237	2.042914e-04
## 48	100.000000	87.0523416	2.259732e-04
## 49	100.000000	86.7768595	2.494473e-04
## 50	100.000000	86.5013774	2.610192e-04
## 51	100.000000	86.2258953	2.705188e-04
## 52	100.000000	85.9504132	2.778097e-04
## 53	100.000000	85.6749311	2.872989e-04
## 54	100.000000	85.3994490	2.961085e-04
## 55	100.000000	85.1239669	2.980311e-04
## 56	100.000000	84.8484848	3.008404e-04
## 57	100.000000	84.5730028	3.063999e-04
## 58	100.000000	84.2975207	3.106088e-04
## 59	100.000000	84.0220386	3.128557e-04
## 60	100.000000	83.7465565	3.294442e-04
## 61	100.000000	83.4710744	3.496562e-04
## 62	100.000000	83.1955923	3.543486e-04
## 63	100.000000	82.9201102	3.551435e-04
## 64	100.000000	82.6446281	3.601941e-04
## 65	100.000000	82.3691460	3.694773e-04
## 66	100.000000	82.0936639	3.752938e-04
## 67	100.000000	81.8181818	3.764033e-04
## 68	100.000000	81.5426997	3.856330e-04
## 69	100.000000	81.2672176	4.047203e-04
## 70	100.000000	80.9917355	4.178353e-04
## 71	100.000000	80.7162534	4.259268e-04
## 72	100.000000	80.4407713	4.364370e-04
## 73	100.000000	80.1652893	4.441787e-04
## 74	100.000000	79.8898072	4.466331e-04

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## 75 100.000000 79.6143251 4.579783e-04
## 76 100.000000 79.3388430 4.748544e-04
## 77 100.000000 79.0633609 4.880432e-04
## 78 100.000000 78.7878788 5.017716e-04
## 79 100.000000 78.5123967 5.108677e-04
## 80 100.000000 78.2369146 5.158455e-04
## 81 100.000000 77.9614325 5.327524e-04
## 82 100.000000 77.6859504 5.502643e-04
## 83 100.000000 77.4104683 5.605820e-04
## 84 100.000000 77.1349862 5.742062e-04
## 85 100.000000 76.8595041 5.859023e-04
## 86 100.000000 76.5840220 6.140198e-04
## 87 100.000000 76.3085399 6.437597e-04
## 88 100.000000 76.0330579 6.601603e-04
## 89 100.000000 75.7575758 6.957640e-04
## 90 100.000000 75.4820937 7.287576e-04
## 91 100.000000 75.2066116 7.456399e-04
## 92 100.000000 74.9311295 8.034081e-04
## 93 100.000000 74.6556474 8.511191e-04
## 94 100.000000 74.3801653 8.567381e-04
## 95 100.000000 74.1046832 8.669627e-04
## 96 100.000000 73.8292011 8.941307e-04
## 97 100.000000 73.5537190 9.333966e-04
## 98 100.000000 73.2782369 9.507801e-04
## 99 100.000000 73.0027548 9.623479e-04
## 100 100.000000 72.7272727 9.736639e-04
## 101 100.000000 72.4517906 9.762352e-04
## 102 100.000000 72.1763085 9.891350e-04
## 103 100.000000 71.9008264 1.002012e-03
## 104 100.000000 71.6253444 1.041900e-03
## 105 100.000000 71.3498623 1.096085e-03
## 106 100.000000 71.0743802 1.139713e-03
## 107 100.000000 70.7988981 1.205881e-03
## 108 100.000000 70.5234160 1.274580e-03
## 109 100.000000 70.2479339 1.321238e-03
## 110 100.000000 69.9724518 1.353823e-03
## 111 100.000000 69.6969697 1.373435e-03
## 112 100.000000 69.4214876 1.425390e-03
## 113 100.000000 69.1460055 1.485425e-03
## 114 100.000000 68.8705234 1.544113e-03
## 115 100.000000 68.5950413 1.630058e-03
## 116 100.000000 68.3195592 1.672956e-03
## 117 100.000000 68.0440771 1.730244e-03
## 118 100.000000 67.7685950 1.789128e-03
## 119 100.000000 67.4931129 1.804148e-03
## 120 100.000000 67.2176309 1.831649e-03
## 121 100.000000 66.9421488 1.884822e-03
## 122 100.000000 66.6666667 1.928836e-03
## 123 100.000000 66.3911846 1.955692e-03
## 124 100.000000 66.1157025 2.004188e-03
## 125 100.000000 65.8402204 2.058596e-03
## 126 100.000000 65.5647383 2.162774e-03
## 127 100.000000 65.2892562 2.275688e-03
## 128 100.000000 65.0137741 2.331098e-03

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##	129	100.000000	64.7382920	2.421425e-03
##	130	100.000000	64.4628099	2.530534e-03
##	131	100.000000	64.1873278	2.574690e-03
##	132	100.000000	63.9118457	2.579934e-03
##	133	100.000000	63.6363636	2.657681e-03
##	134	100.000000	63.3608815	2.797900e-03
##	135	100.000000	63.0853994	2.879915e-03
##	136	100.000000	62.8099174	2.908022e-03
##	137	100.000000	62.5344353	2.941883e-03
##	138	100.000000	62.2589532	3.000538e-03
##	139	100.000000	61.9834711	3.043849e-03
##	140	100.000000	61.7079890	3.084960e-03
##	141	100.000000	61.4325069	3.130588e-03
##	142	100.000000	61.1570248	3.144679e-03
##	143	100.000000	60.8815427	3.281250e-03
##	144	100.000000	60.6060606	3.476473e-03
##	145	100.000000	60.3305785	3.544010e-03
##	146	100.000000	60.0550964	3.598443e-03
##	147	100.000000	59.7796143	3.736161e-03
##	148	100.000000	59.5041322	3.954858e-03
##	149	100.000000	59.2286501	4.088390e-03
##	150	100.000000	58.9531680	4.245095e-03
##	151	100.000000	58.6776860	4.408547e-03
##	152	100.000000	58.4022039	4.422453e-03
##	153	100.000000	58.1267218	4.450884e-03
##	154	100.000000	57.8512397	4.540612e-03
##	155	100.000000	57.5757576	4.647735e-03
##	156	100.000000	57.3002755	4.747661e-03
##	157	100.000000	57.0247934	4.826019e-03
##	158	100.000000	56.7493113	4.853176e-03
##	159	100.000000	56.4738292	4.874328e-03
##	160	100.000000	56.1983471	4.897948e-03
##	161	100.000000	55.9228650	4.933004e-03
##	162	100.000000	55.6473829	4.965148e-03
##	163	100.000000	55.3719008	5.005986e-03
##	164	100.000000	55.0964187	5.093206e-03
##	165	100.000000	54.8209366	5.196776e-03
##	166	100.000000	54.5454545	5.269956e-03
##	167	100.000000	54.2699725	5.584556e-03
##	168	100.000000	53.9944904	5.906411e-03
##	169	100.000000	53.7190083	5.960993e-03
##	170	100.000000	53.4435262	6.175440e-03
##	171	100.000000	53.1680441	6.377135e-03
##	172	100.000000	52.8925620	6.738105e-03
##	173	100.000000	52.6170799	7.146274e-03
##	174	100.000000	52.3415978	7.241864e-03
##	175	100.000000	52.0661157	7.336515e-03
##	176	100.000000	51.7906336	7.424133e-03
##	177	100.000000	51.5151515	7.589300e-03
##	178	100.000000	51.2396694	7.750721e-03
##	179	100.000000	50.9641873	7.843265e-03
##	180	100.000000	50.6887052	7.937883e-03
##	181	100.000000	50.4132231	7.999245e-03
##	182	100.000000	50.1377410	8.063088e-03

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## 183 100.000000 49.8622590 8.365954e-03
## 184 100.000000 49.5867769 8.716875e-03
## 185 100.000000 49.3112948 8.924904e-03
## 186 100.000000 49.0358127 9.078863e-03
## 187 100.000000 48.7603306 9.171760e-03
## 188 100.000000 48.4848485 9.245147e-03
## 189 100.000000 48.2093664 9.308791e-03
## 190 100.000000 47.9338843 9.857672e-03
## 191 100.000000 47.6584022 1.044474e-02
## 192 100.000000 47.3829201 1.081006e-02
## 193 100.000000 47.1074380 1.109787e-02
## 194 100.000000 46.8319559 1.147711e-02
## 195 100.000000 46.5564738 1.213592e-02
## 196 100.000000 46.2809917 1.262796e-02
## 197 100.000000 46.0055096 1.282493e-02
## 198 100.000000 45.7300275 1.293603e-02
## 199 100.000000 45.4545455 1.310817e-02
## 200 100.000000 45.1790634 1.351880e-02
## 201 100.000000 44.9035813 1.390613e-02
## 202 100.000000 44.6280992 1.412607e-02
## 203 100.000000 44.3526171 1.430490e-02
## 204 100.000000 44.0771350 1.439050e-02
## 205 100.000000 43.8016529 1.455920e-02
## 206 100.000000 43.5261708 1.474994e-02
## 207 100.000000 43.2506887 1.486834e-02
## 208 100.000000 42.9752066 1.507378e-02
## 209 100.000000 42.6997245 1.557548e-02
## 210 100.000000 42.4242424 1.616758e-02
## 211 100.000000 42.1487603 1.688403e-02
## 212 100.000000 41.8732782 1.774937e-02
## 213 100.000000 41.5977961 1.823065e-02
## 214 100.000000 41.3223140 1.838262e-02
## 215 100.000000 41.0468320 1.863053e-02
## 216 100.000000 40.7713499 1.898382e-02
## 217 100.000000 40.4958678 1.922977e-02
## 218 100.000000 40.2203857 1.933294e-02
## 219 100.000000 39.9449036 1.997602e-02
## 220 99.145299 39.9449036 2.067664e-02
## 221 99.145299 39.6694215 2.111547e-02
## 222 99.145299 39.3939394 2.150454e-02
## 223 99.145299 39.1184573 2.161934e-02
## 224 99.145299 38.8429752 2.168919e-02
## 225 99.145299 38.5674931 2.179698e-02
## 226 99.145299 38.2920110 2.195566e-02
## 227 99.145299 38.0165289 2.266624e-02
## 228 99.145299 37.7410468 2.371985e-02
## 229 99.145299 37.4655647 2.450670e-02
## 230 99.145299 37.1900826 2.503849e-02
## 231 99.145299 36.9146006 2.564823e-02
## 232 99.145299 36.6391185 2.615032e-02
## 233 98.290598 36.6391185 2.633391e-02
## 234 98.290598 36.3636364 2.652095e-02
## 235 98.290598 36.0881543 2.704712e-02
## 236 98.290598 35.8126722 2.781011e-02

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## 237 98.290598 35.5371901 2.879258e-02
## 238 98.290598 35.2617080 2.965221e-02
## 239 98.290598 34.9862259 3.040729e-02
## 240 98.290598 34.7107438 3.108299e-02
## 241 98.290598 34.4352617 3.278629e-02
## 242 98.290598 34.1597796 3.471343e-02
## 243 98.290598 33.8842975 3.538794e-02
## 244 98.290598 33.6088154 3.627962e-02
## 245 98.290598 33.3333333 3.691305e-02
## 246 98.290598 33.0578512 3.735878e-02
## 247 98.290598 32.7823691 3.775197e-02
## 248 98.290598 32.5068871 3.804236e-02
## 249 97.435897 32.5068871 3.855513e-02
## 250 97.435897 32.2314050 3.891265e-02
## 251 97.435897 31.9559229 3.909223e-02
## 252 97.435897 31.6804408 3.933988e-02
## 253 97.435897 31.4049587 3.983621e-02
## 254 97.435897 31.1294766 4.046382e-02
## 255 97.435897 30.8539945 4.216860e-02
## 256 97.435897 30.5785124 4.393835e-02
## 257 97.435897 30.3030303 4.434418e-02
## 258 97.435897 30.0275482 4.461871e-02
## 259 96.581197 30.0275482 4.594774e-02
## 260 96.581197 29.7520661 4.865821e-02
## 261 96.581197 29.4765840 5.095285e-02
## 262 96.581197 29.2011019 5.164237e-02
## 263 96.581197 28.9256198 5.449596e-02
## 264 96.581197 28.6501377 5.789320e-02
## 265 96.581197 28.3746556 5.892332e-02
## 266 96.581197 28.0991736 6.099654e-02
## 267 96.581197 27.8236915 6.352113e-02
## 268 96.581197 27.5482094 6.535382e-02
## 269 96.581197 27.2727273 6.642150e-02
## 270 96.581197 26.9972452 6.663374e-02
## 271 96.581197 26.7217631 6.732850e-02
## 272 96.581197 26.4462810 6.885467e-02
## 273 96.581197 26.1707989 7.023031e-02
## 274 96.581197 25.8953168 7.100820e-02
## 275 96.581197 25.6198347 7.174821e-02
## 276 96.581197 25.3443526 7.283780e-02
## 277 96.581197 25.0688705 7.503479e-02
## 278 96.581197 24.7933884 7.722600e-02
## 279 96.581197 24.5179063 7.967759e-02
## 280 96.581197 24.2424242 8.192605e-02
## 281 96.581197 23.9669421 8.312674e-02
## 282 95.726496 23.9669421 8.418316e-02
## 283 95.726496 23.6914601 8.467503e-02
## 284 95.726496 23.4159780 8.736892e-02
## 285 95.726496 23.1404959 9.023839e-02
## 286 95.726496 22.8650138 9.066428e-02
## 287 95.726496 22.5895317 9.318272e-02
## 288 95.726496 22.3140496 9.773891e-02
## 289 94.871795 22.3140496 1.002749e-01
## 290 94.871795 22.0385675 1.012011e-01

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## 291 94.871795 21.7630854 1.018059e-01
## 292 94.871795 21.4876033 1.026073e-01
## 293 94.871795 21.2121212 1.046547e-01
## 294 94.871795 20.9366391 1.066206e-01
## 295 94.871795 20.6611570 1.090988e-01
## 296 94.017094 20.6611570 1.135224e-01
## 297 94.017094 20.3856749 1.161078e-01
## 298 94.017094 20.1101928 1.164046e-01
## 299 94.017094 19.8347107 1.205474e-01
## 300 94.017094 19.5592287 1.256601e-01
## 301 93.162393 19.5592287 1.283636e-01
## 302 93.162393 19.2837466 1.335810e-01
## 303 92.307692 19.2837466 1.378116e-01
## 304 92.307692 19.0082645 1.390120e-01
## 305 92.307692 18.7327824 1.403918e-01
## 306 92.307692 18.4573003 1.414501e-01
## 307 92.307692 18.1818182 1.426674e-01
## 308 91.452991 18.1818182 1.445253e-01
## 309 91.452991 17.9063361 1.464264e-01
## 310 90.598291 17.9063361 1.475062e-01
## 311 90.598291 17.6308540 1.485592e-01
## 312 90.598291 17.3553719 1.496005e-01
## 313 90.598291 17.0798898 1.547945e-01
## 314 90.598291 16.8044077 1.598636e-01
## 315 90.598291 16.5289256 1.600440e-01
## 316 90.598291 16.2534435 1.635657e-01
## 317 90.598291 15.9779614 1.682812e-01
## 318 90.598291 15.7024793 1.714873e-01
## 319 90.598291 15.4269972 1.749566e-01
## 320 90.598291 15.1515152 1.768414e-01
## 321 90.598291 14.8760331 1.778978e-01
## 322 90.598291 14.6005510 1.819215e-01
## 323 90.598291 14.3250689 1.873058e-01
## 324 90.598291 14.0495868 1.907602e-01
## 325 89.743590 14.0495868 1.960121e-01
## 326 89.743590 13.7741047 2.016315e-01
## 327 89.743590 13.4986226 2.033658e-01
## 328 89.743590 13.2231405 2.043576e-01
## 329 89.743590 12.9476584 2.059896e-01
## 330 89.743590 12.6721763 2.086924e-01
## 331 89.743590 12.3966942 2.137123e-01
## 332 89.743590 12.1212121 2.173500e-01
## 333 89.743590 11.8457300 2.192729e-01
## 334 89.743590 11.5702479 2.229299e-01
## 335 89.743590 11.2947658 2.283979e-01
## 336 88.888889 11.2947658 2.323920e-01
## 337 88.034188 11.2947658 2.334853e-01
## 338 88.034188 11.0192837 2.363251e-01
## 339 88.034188 10.7438017 2.391102e-01
## 340 88.034188 10.4683196 2.397182e-01
## 341 88.034188 10.1928375 2.438162e-01
## 342 87.179487 10.1928375 2.542723e-01
## 343 86.324786 10.1928375 2.654620e-01
## 344 86.324786 9.9173554 2.738138e-01

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## 345	86.324786	9.6418733	2.805141e-01
## 346	86.324786	9.3663912	2.924214e-01
## 347	86.324786	9.0909091	3.029083e-01
## 348	86.324786	8.8154270	3.095164e-01
## 349	85.470085	8.8154270	3.175061e-01
## 350	85.470085	8.5399449	3.208926e-01
## 351	85.470085	8.2644628	3.272393e-01
## 352	85.470085	7.9889807	3.417978e-01
## 353	85.470085	7.7134986	3.508810e-01
## 354	84.615385	7.7134986	3.512611e-01
## 355	84.615385	7.4380165	3.524196e-01
## 356	84.615385	7.1625344	3.535874e-01
## 357	84.615385	6.8870523	3.551282e-01
## 358	83.760684	6.8870523	3.574929e-01
## 359	83.760684	6.6115702	3.668063e-01
## 360	83.760684	6.3360882	3.769047e-01
## 361	82.905983	6.3360882	3.847215e-01
## 362	82.905983	6.0606061	3.957163e-01
## 363	82.905983	5.7851240	4.032676e-01
## 364	82.051282	5.7851240	4.068241e-01
## 365	82.051282	5.5096419	4.183262e-01
## 366	81.196581	5.5096419	4.307308e-01
## 367	80.341880	5.5096419	4.364288e-01
## 368	80.341880	5.2341598	4.402250e-01
## 369	80.341880	4.9586777	4.461405e-01
## 370	80.341880	4.6831956	4.600512e-01
## 371	80.341880	4.4077135	4.707853e-01
## 372	79.487179	4.4077135	4.785492e-01
## 373	79.487179	4.1322314	4.887635e-01
## 374	78.632479	4.1322314	4.943197e-01
## 375	78.632479	3.8567493	5.057742e-01
## 376	78.632479	3.5812672	5.250053e-01
## 377	78.632479	3.3057851	5.371684e-01
## 378	78.632479	3.0303030	5.434299e-01
## 379	77.777778	3.0303030	5.561521e-01
## 380	76.923077	3.0303030	5.742613e-01
## 381	76.923077	2.7548209	5.845650e-01
## 382	76.923077	2.4793388	5.872872e-01
## 383	76.068376	2.4793388	5.974882e-01
## 384	75.213675	2.4793388	6.161783e-01
## 385	74.358974	2.4793388	6.275422e-01
## 386	73.504274	2.4793388	6.327821e-01
## 387	72.649573	2.4793388	6.362681e-01
## 388	71.794872	2.4793388	6.412980e-01
## 389	70.940171	2.4793388	6.457187e-01
## 390	70.085470	2.4793388	6.576968e-01
## 391	69.230769	2.4793388	6.694575e-01
## 392	69.230769	2.2038567	6.708508e-01
## 393	68.376068	2.2038567	6.720477e-01
## 394	68.376068	1.9283747	6.730063e-01
## 395	68.376068	1.6528926	6.757312e-01
## 396	67.521368	1.6528926	6.786634e-01
## 397	67.521368	1.3774105	6.817758e-01
## 398	66.666667	1.3774105	6.895239e-01

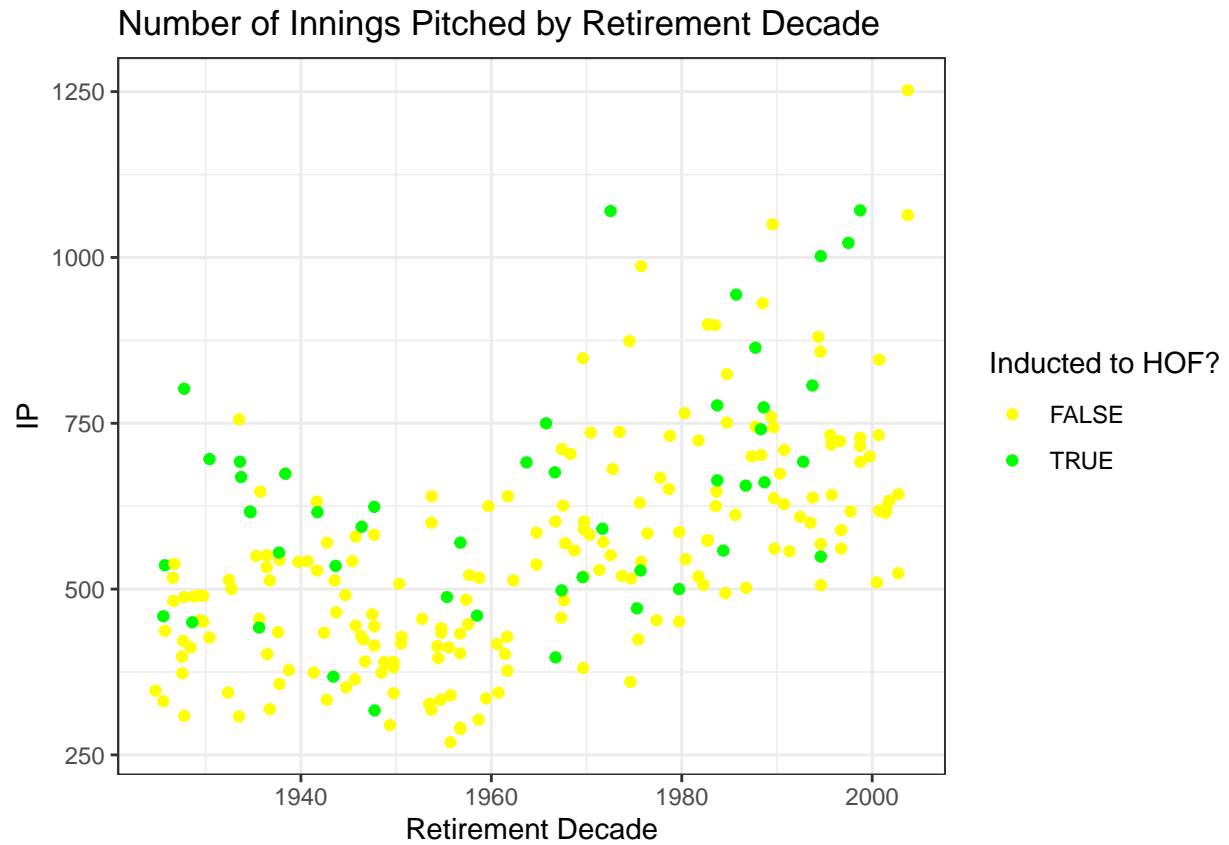
## 399	65.811966	1.3774105	6.976271e-01
## 400	65.811966	1.1019284	7.007217e-01
## 401	64.957265	1.1019284	7.108997e-01
## 402	64.957265	0.8264463	7.368798e-01
## 403	64.957265	0.5509642	7.621520e-01
## 404	64.102564	0.5509642	7.733266e-01
## 405	63.247863	0.5509642	7.765811e-01
## 406	62.393162	0.5509642	7.790005e-01
## 407	62.393162	0.2754821	7.806705e-01
## 408	61.538462	0.2754821	7.831829e-01
## 409	60.683761	0.2754821	7.927309e-01
## 410	59.829060	0.2754821	8.084240e-01
## 411	58.974359	0.2754821	8.258807e-01
## 412	58.119658	0.2754821	8.369627e-01
## 413	57.264957	0.2754821	8.425146e-01
## 414	56.410256	0.2754821	8.462252e-01
## 415	55.555556	0.2754821	8.502326e-01
## 416	54.700855	0.2754821	8.564402e-01
## 417	53.846154	0.2754821	8.654367e-01
## 418	53.846154	0.0000000	8.742593e-01
## 419	52.991453	0.0000000	8.786878e-01
## 420	52.136752	0.0000000	8.826548e-01
## 421	51.282051	0.0000000	8.867077e-01
## 422	50.427350	0.0000000	8.895947e-01
## 423	49.572650	0.0000000	8.922549e-01
## 424	48.717949	0.0000000	9.058555e-01
## 425	47.863248	0.0000000	9.185539e-01
## 426	47.008547	0.0000000	9.229513e-01
## 427	46.153846	0.0000000	9.275024e-01
## 428	45.299145	0.0000000	9.302134e-01
## 429	44.444444	0.0000000	9.378333e-01
## 430	43.589744	0.0000000	9.453009e-01
## 431	42.735043	0.0000000	9.498681e-01
## 432	41.880342	0.0000000	9.535190e-01
## 433	41.025641	0.0000000	9.554316e-01
## 434	40.170940	0.0000000	9.571117e-01
## 435	39.316239	0.0000000	9.594494e-01
## 436	38.461538	0.0000000	9.662417e-01
## 437	37.606838	0.0000000	9.710365e-01
## 438	36.752137	0.0000000	9.731326e-01
## 439	35.897436	0.0000000	9.771799e-01
## 440	35.042735	0.0000000	9.803096e-01
## 441	34.188034	0.0000000	9.815586e-01
## 442	33.333333	0.0000000	9.817203e-01
## 443	32.478632	0.0000000	9.824376e-01
## 444	31.623932	0.0000000	9.831434e-01
## 445	30.769231	0.0000000	9.832492e-01
## 446	29.914530	0.0000000	9.853390e-01
## 447	29.059829	0.0000000	9.873791e-01
## 448	28.205128	0.0000000	9.881717e-01
## 449	27.350427	0.0000000	9.907065e-01
## 450	26.495726	0.0000000	9.925507e-01
## 451	25.641026	0.0000000	9.930551e-01
## 452	24.786325	0.0000000	9.939226e-01

```

## 453 23.931624 0.0000000 9.944458e-01
## 454 23.076923 0.0000000 9.950747e-01
## 455 22.222222 0.0000000 9.959692e-01
## 456 21.367521 0.0000000 9.963491e-01
## 457 20.512821 0.0000000 9.966309e-01
## 458 19.658120 0.0000000 9.973468e-01
## 459 18.803419 0.0000000 9.981451e-01
## 460 17.948718 0.0000000 9.987814e-01
## 461 17.094017 0.0000000 9.991228e-01
## 462 16.239316 0.0000000 9.992248e-01
## 463 15.384615 0.0000000 9.993753e-01
## 464 14.529915 0.0000000 9.995727e-01
## 465 13.675214 0.0000000 9.997374e-01
## 466 12.820513 0.0000000 9.998104e-01
## 467 11.965812 0.0000000 9.999054e-01
## 468 11.111111 0.0000000 9.999676e-01
## 469 10.256410 0.0000000 9.999832e-01
## 470 9.401709 0.0000000 9.999974e-01
## 471 8.547009 0.0000000 9.999993e-01
## 472 7.692308 0.0000000 9.999999e-01
## 473 6.837607 0.0000000 1.000000e+00
## 474 5.982906 0.0000000 1.000000e+00
## 475 5.128205 0.0000000 1.000000e+00
## 476 4.273504 0.0000000 1.000000e+00
## 477 3.418803 0.0000000 1.000000e+00
## 478 2.564103 0.0000000 1.000000e+00
## 479 1.709402 0.0000000 1.000000e+00
## 480 0.000000 0.0000000 Inf

## [1] "Original composition of HOF pitchers in data: 1%."

```

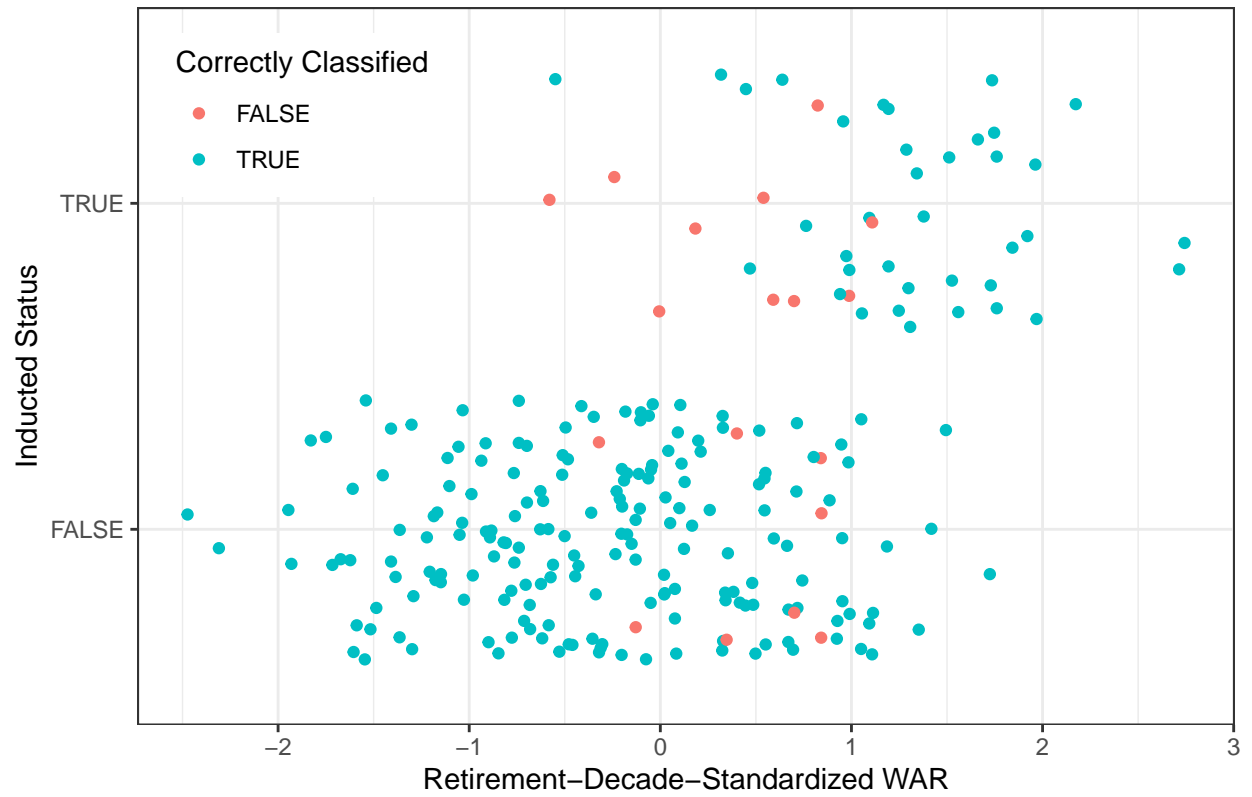


```
## [1] "New composition of HOF pitchers in data: 19.6%."
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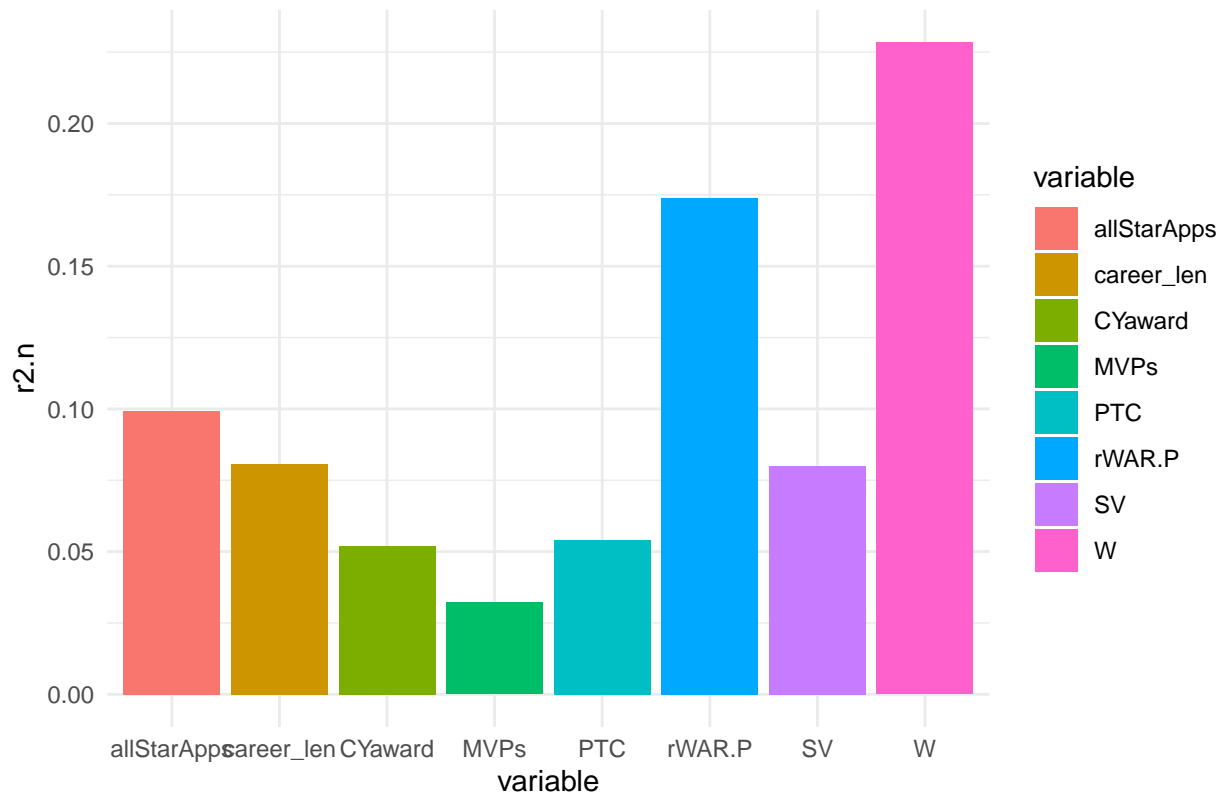
Logistic Modeling Results for Pitchers

Model	Misclass Rate	AUC
Batters	8.8%	0.959
Pitchers	7.5%	0.958

WAR vs. Induction Status by Improved Classification Accuracy



General Dominance



Hall of Fame Batter Predicitons

Player	Probability	Inducted	Eligible	HOF Class
Miguel Cabrera	100.0%			
Albert Pujols	99.4%			
Ken Griffey	99.4%	X	2016	2016
Barry Larkin	99.1%	X	2010	2012
Ivan Rodriguez	98.8%	X	2017	2017
Derek Jeter	97.2%	X	2020	2020
Mike Piazza	96.0%	X	2013	2016
Chipper Jones	79.1%	X	2018	2018
Vladimir Guerrero	79.0%	X	2017	2018
David Ortiz	74.3%		2022	
Roberto Alomar	68.9%	X	2010	2011
Frank Thomas	59.3%	X	2014	2014
Adrian Beltre	58.8%		2024	
Craig Biggio	55.1%	X	2013	2015
Edgar Martinez	46.4%	X	2010	2019
Sammy Sosa	40.8%		2013	
Carlos Beltran	24.4%		2023	
Ichiro Suzuki	23.6%		2025	
Jim Thome	19.6%	X	2018	2018
Jeff Bagwell	19.4%	X	2011	2017
Larry Walker	19.4%	X	2011	2020
Barry Bonds	15.2%		2013	

Hall of Fame Pitcher Predicitons

Player	Probability	Inducted	Eligible	HOF Class
Mariano Rivera	100.0%	X	2019	2019
Greg Maddux	100.0%	X	2014	2014
Randy Johnson	100.0%	X	2015	2015
Trevor Hoffman	100.0%	X	2016	2018
Justin Verlander	99.9%			
Tom Glavine	99.7%	X	2014	2014
John Smoltz	97.0%	X	2015	2015
Roger Clemens	96.3%		2013	
Mike Mussina	96.1%	X	2014	2019
CC Sabathia	89.4%		2025	
Francisco Rodriguez	84.4%		2023	
John Franco	75.1%		2011	
Joe Nathan	59.4%		2022	
Billy Wagner	58.5%		2016	
Jonathan Papelbon	48.2%		2022	
Mark Buehrle	38.7%		2021	
Tim Hudson	38.2%		2021	
Craig Kimbrel	24.4%			
David Wells	15.9%		2013	