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Nominal Logistic Fit for converged

Effect Summary

| Source | Logworth | PValue |
|--------------------|----------|-----------|
| app_id | 28.097 | 0.00000 |
| version | 17.555 | 0.00000 |
| rag | 3.234 | 0.00058 |
| app_id*summarized | 2.788 | 0.00163 |
| app_id*version | 1.925 | 0.01190 |
| version*summarized | 1.007 | 0.09848 |
| rag*summarized | 0.747 | 0.17887 |
| version*rag | 0.676 | 0.21084 |
| summarized | 0.018 | 0.95851 ^ |

Converged in Gradient, 5 iterations

Iterations

| Iter | Objective | Relative Gradient | Norm Gradient |
|------|--------------|-------------------|---------------|
| 0 | 690.37459184 | 15.854224306 | 215.6107604 |
| 1 | 554.44330153 | 3.4608164729 | 31.981682559 |
| 2 | 547.72250556 | 0.8430274764 | 4.9512381577 |
| 3 | 547.344787 | 0.0908044196 | 0.4213095905 |
| 4 | 547.34062479 | 0.0013422089 | 0.0062225442 |
| 5 | 547.34062389 | 3.146429e-7 | 1.4929754e-6 |

Whole Model Test

| Model | -LogLikelihood | DF | ChiSquare | Prob>ChiSq |
|------------|----------------|----|-----------|------------|
| Difference | 142.23054 | 29 | 284.4611 | <.0001* |
| Full | 547.34062 | | | |
| Reduced | 689.57116 | | | |

| | |
|----------------------------|---------|
| RSquare (U) | 0.2063 |
| AICc | 1156.61 |
| BIC | 1301.79 |
| Observations (or Sum Wgts) | 996 |

Fit Details

| Measure | Training | Definition |
|------------------------|----------|---|
| Entropy RSquare | 0.2063 | 1-Loglike(model)/Loglike(0) |
| Generalized RSquare | 0.3314 | (1-(L(0)/L(model))^(2/n))/(1-L(0)^(2/n)) |
| Mean -Log p | 0.5495 | $\sum -\text{Log}(\rho_{ij})/n$ |
| RASE | 0.4305 | $\sqrt{\sum (y_{ij} - \rho_{ij})^2/n}$ |
| Mean Abs Dev | 0.3716 | $\sum y_{ij} - \rho_{ij} /n$ |
| Misclassification Rate | 0.2892 | $\sum (\rho_{ij} \neq \rho_{\text{Max}})/n$ |
| N | 996 | n |

Lack Of Fit

| Source | DF | -LogLikelihood | ChiSquare | Prob>ChiSq |
|-------------|----|----------------|-----------|------------|
| Lack Of Fit | 30 | 24.36333 | 48.72665 | |
| Saturated | 59 | 522.97730 | | |
| Fitted | 29 | 547.34062 | 0.0168* | |

Parameter Estimates

| Term | Estimate | Std Error | ChiSquare | Prob>ChiSq |
|-----------------------------|------------|-----------|-----------|------------|
| Intercept | 0.12052696 | 0.0962314 | 1.57 | 0.2104 |
| app_id[WordPress] | 1.01919314 | 0.1896463 | 28.88 | <.0001* |
| app_id[Stack4Things] | -0.9922157 | 0.304667 | 10.61 | 0.0011* |
| app_id[Open Energy Monitor] | 0.84017029 | 0.1767782 | 22.59 | <.0001* |
| app_id[JetRacer] | -0.070417 | 0.1535951 | 0.21 | 0.6466 |
| app_id[eWeLink] | 0.62523412 | 0.1999081 | 9.78 | 0.0018* |
| version[v3] | 1.09100533 | 0.1321583 | 68.15 | <.0001* |
| version[v2] | -0.4637881 | 0.1331601 | 12.13 | 0.0005* |
| rag[1] | 0.30232858 | 0.0886378 | 11.63 | 0.0006* |

Nominal Logistic Fit for converged

Parameter Estimates

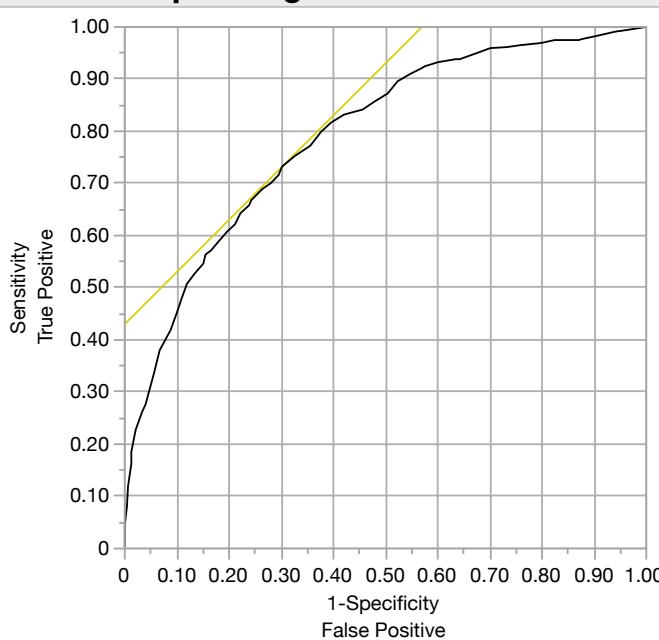
| Term | Estimate | Std Error | ChiSquare | Prob>ChiSq |
|---|------------|-----------|-----------|----------------|
| summarized[1] | 0.00458076 | 0.0880498 | 0.00 | 0.9585 |
| app_id[WordPress]*version[v3] | -0.9349207 | 0.254043 | 13.54 | 0.0002* |
| app_id[WordPress]*version[v2] | 0.26207014 | 0.276418 | 0.90 | 0.3431 |
| app_id[Stack4Things]*version[v3] | 0.50085932 | 0.3441304 | 2.12 | 0.1455 |
| app_id[Stack4Things]*version[v2] | 0.2100421 | 0.4029729 | 0.27 | 0.6022 |
| app_id[Open Energy Monitor]*version[v3] | 0.76198994 | 0.2836062 | 7.22 | 0.0072* |
| app_id[Open Energy Monitor]*version[v2] | -0.4008247 | 0.2263233 | 3.14 | 0.0766 |
| app_id[JetRacer]*version[v3] | -0.125994 | 0.2128619 | 0.35 | 0.5539 |
| app_id[JetRacer]*version[v2] | 0.0047845 | 0.2137432 | 0.00 | 0.9821 |
| app_id[eWeLink]*version[v3] | -0.0260423 | 0.287104 | 0.01 | 0.9277 |
| app_id[eWeLink]*version[v2] | 0.01993729 | 0.2785931 | 0.01 | 0.9429 |
| app_id[WordPress]*summarized[1] | -0.2945887 | 0.1838773 | 2.57 | 0.1091 |
| app_id[Stack4Things]*summarized[1] | -0.5937802 | 0.2502835 | 5.63 | 0.0177* |
| app_id[Open Energy Monitor]*summarized[1] | 0.28111996 | 0.1624333 | 3.00 | 0.0835 |
| app_id[JetRacer]*summarized[1] | 0.53401893 | 0.1502435 | 12.63 | 0.0004* |
| app_id[eWeLink]*summarized[1] | -0.0579872 | 0.1960566 | 0.09 | 0.7674 |
| version[v3]*rag[1] | -0.0376697 | 0.1237682 | 0.09 | 0.7609 |
| version[v2]*rag[1] | -0.1704807 | 0.1238495 | 1.89 | 0.1687 |
| version[v3]*summarized[1] | 0.19610203 | 0.1122106 | 3.05 | 0.0805 |
| version[v2]*summarized[1] | -0.2112435 | 0.1079831 | 3.83 | 0.0504 |
| rag[1]*summarized[1] | -0.1198802 | 0.0892051 | 1.81 | 0.1790 |

For log odds of 1/0

Effect Likelihood Ratio Tests

| Source | Nparm | DF | ChiSquare | L-R | Prob>ChiSq |
|--------------------|-------|----|------------|----------------|------------|
| app_id | 5 | 5 | 141.645823 | <.0001* | |
| version | 2 | 2 | 80.8437988 | <.0001* | |
| rag | 1 | 1 | 11.8267467 | 0.0006* | |
| summarized | 1 | 1 | 0.00270601 | 0.9585 | |
| app_id*version | 10 | 10 | 22.7027385 | 0.0119* | |
| app_id*summarized | 5 | 5 | 19.3852175 | 0.0016* | |
| version*rag | 2 | 2 | 3.11327659 | 0.2108 | |
| version*summarized | 2 | 2 | 4.63579234 | 0.0985 | |
| rag*summarized | 1 | 1 | 1.80702111 | 0.1789 | |

Receiver Operating Characteristic

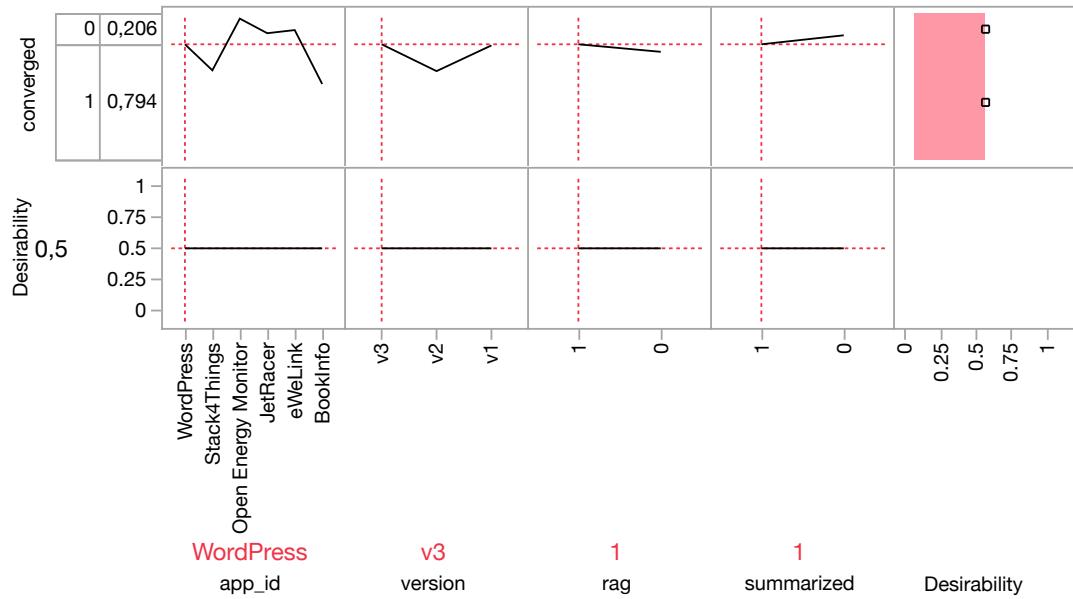


Using converged='1' to be the positive level

AUC

Nominal Logistic Fit for converged

Prediction Profiler



Odds Ratios

For converged odds of 1 versus 0

Odds Ratios for app_id

| Level1 | /Level2 | Odds Ratio | Prob>Chisq | 95% Confidence Interval (Wald) | |
|---------------------|---------------------|------------|------------|--------------------------------|----------|
| | | | | Lower | Upper |
| WordPress | BookInfo | 11.48633 | <.0001* | 6.605431 | 19.97385 |
| Stack4Things | BookInfo | 1.536872 | 0.2800 | 0.704713 | 3.351687 |
| Open Energy Monitor | BookInfo | 9.603573 | <.0001* | 5.764457 | 15.99953 |
| JetRacer | BookInfo | 3.863401 | <.0001* | 2.427387 | 6.148944 |
| eWeLink | BookInfo | 7.746174 | <.0001* | 4.365555 | 13.74469 |
| BookInfo | eWeLink | 0.129096 | <.0001* | 0.072755 | 0.229066 |
| WordPress | eWeLink | 1.48284 | 0.1644 | 0.850979 | 2.583865 |
| Stack4Things | eWeLink | 0.198404 | 0.0001* | 0.087237 | 0.45123 |
| Open Energy Monitor | eWeLink | 1.239783 | 0.4542 | 0.706183 | 2.176575 |
| JetRacer | eWeLink | 0.49875 | 0.0092* | 0.29555 | 0.841656 |
| eWeLink | JetRacer | 2.005014 | 0.0092* | 1.188134 | 3.383525 |
| BookInfo | JetRacer | 0.258839 | <.0001* | 0.16263 | 0.411966 |
| WordPress | JetRacer | 2.973115 | <.0001* | 1.801645 | 4.9063 |
| Stack4Things | JetRacer | 0.397803 | 0.0168* | 0.186917 | 0.846618 |
| Open Energy Monitor | JetRacer | 2.485782 | 0.0001* | 1.56441 | 3.949804 |
| JetRacer | Open Energy Monitor | 0.402288 | 0.0001* | 0.253177 | 0.639219 |
| eWeLink | Open Energy Monitor | 0.806593 | 0.4542 | 0.459437 | 1.416063 |
| BookInfo | Open Energy Monitor | 0.104128 | <.0001* | 0.062502 | 0.173477 |
| WordPress | Open Energy Monitor | 1.196048 | 0.5176 | 0.69542 | 2.057076 |
| Stack4Things | Open Energy Monitor | 0.160031 | <.0001* | 0.072988 | 0.350882 |
| Open Energy Monitor | Stack4Things | 6.248778 | <.0001* | 2.849963 | 13.70096 |
| JetRacer | Stack4Things | 2.513808 | 0.0168* | 1.181171 | 5.349971 |
| eWeLink | Stack4Things | 5.04022 | 0.0001* | 2.216163 | 11.46298 |
| BookInfo | Stack4Things | 0.650672 | 0.2800 | 0.298357 | 1.419018 |
| WordPress | Stack4Things | 7.473839 | <.0001* | 3.334548 | 16.75137 |
| Stack4Things | WordPress | 0.1338 | <.0001* | 0.059697 | 0.299891 |
| Open Energy Monitor | WordPress | 0.836087 | 0.5176 | 0.486127 | 1.43798 |
| JetRacer | WordPress | 0.336348 | <.0001* | 0.20382 | 0.555048 |
| eWeLink | WordPress | 0.674382 | 0.1644 | 0.387017 | 1.175118 |
| BookInfo | WordPress | 0.08706 | <.0001* | 0.050065 | 0.151391 |

Nominal Logistic Fit for converged

Odds Ratios

Odds Ratios for version

| Level1 | /Level2 | Odds Ratio | Prob>Chisq | 95% Confidence Interval (Wald) | |
|--------|---------|------------|------------|--------------------------------|----------|
| | | | | Lower | Upper |
| v3 | v1 | 5.574611 | <.0001* | 3.48317 | 8.921842 |
| v2 | v1 | 1.177542 | 0.4988 | 0.733376 | 1.890714 |
| v1 | v2 | 0.849227 | 0.4988 | 0.528901 | 1.363556 |
| v3 | v2 | 4.734108 | <.0001* | 3.051457 | 7.344618 |
| v2 | v3 | 0.211233 | <.0001* | 0.136154 | 0.327712 |
| v1 | v3 | 0.179385 | <.0001* | 0.112084 | 0.287095 |

Odds Ratios for rag

| Level1 | /Level2 | Odds Ratio | Prob>Chisq | 95% Confidence Interval (Wald) | |
|--------|---------|------------|------------|--------------------------------|----------|
| | | | | Lower | Upper |
| 1 | 0 | 1.830624 | 0.0006* | 1.293308 | 2.591174 |
| 0 | 1 | 0.546262 | 0.0006* | 0.385926 | 0.773211 |

Odds Ratios for summarized

| Level1 | /Level2 | Odds Ratio | Prob>Chisq | 95% Confidence Interval (Wald) | |
|--------|---------|------------|------------|--------------------------------|----------|
| | | | | Lower | Upper |
| 1 | 0 | 1.009204 | 0.9585 | 0.714632 | 1.425198 |
| 0 | 1 | 0.99088 | 0.9585 | 0.701657 | 1.399321 |

Normal approximations used for ratio confidence limits effects: app_id version rag summarized

Tests and confidence intervals on odds ratios are Wald based.