# Model Performance Summary

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| **Legend** | | | |
| Group 1 | Group 2 | Group 3 | Group 4 |

|  | | **Malnourished** | **Stunted** | **Wasting** | **Underweight** |
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| **Naïve Bayes** | Normal split, e1071 Naïve Bayes | Model name: malNBModel  Accuracy: 0.56  Recall: 0.54  Precision: 0.58  Kappa: 0.11 | Model name: stuntNBModel  Accuracy: 0.68  Recall: 0.15  Precision: 0.92  Kappa: 0.08 | Model name: wastNBModel  Accuracy: 0.91  Recall: 0.05  Precision: 0.98  Kappa: 0.05 | Model name: underNBModel  Accuracy: 0.85  Recall: 0.00  Precision: 0.996  Kappa: -0.007 |
| Stratified 10-fold cross validation with caret Naïve Bayes | Model name: malNBModel2  Accuracy: 0.58  (folds: 0.55-0.66)  Recall: 0.44  Precision: 0.66  Kappa: 0.10  (folds: -0.08-0.22) | Model name: stuntNBModel2  Accuracy: 0.66  (folds: 0.57-0.68)  Recall: 0.15  Precision: 0.92  Kappa: 0.08  (folds: 0.0-0.17) | Model name: wastNBModel2  Accuracy: 0.92  (folds: 0.88-0.94)  Recall: 0.03  Precision: 0.99  Kappa: 0.03  (folds: -0.06-0.35) | Model name: underNBModel2  Accuracy: 0.85  (folds: 0.85-0.86  Recall: 0.00  Precision: 1.00  Kappa: 0.00  (folds: -0.01-0) |
| Stratified 10-fold cross validation with caret Naïve Bayes and Laplace | Model name: malNBModel3  Accuracy: 0.58  (folds: 0.56-0.64)  Recall: 0.45  Precision: 0.65  Kappa: 0.10  (folds: -0.02­-0.24) | Model name: stuntNBModel3  Accuracy: 0.65  (folds: 0.60-0.69)  Recall: 0.05  Precision: 0.96  Kappa: 0.01  (folds: -0.03-0.15) | Model name: wastNBModel3  Accuracy: 0.92  (folds: 0.86-0.93)  Recall: 0.03  Precision: 0.992  Kappa: 0.03  (folds: -0.07-0.31) | Model name: underNBModel3  Accuracy: 0.85  (folds: 0.85-0.86)  Recall: 0.00  Precision: 1.00  Kappa: 0.00  (folds: -0.01-0) |
| Stratified 10-fold cross validation with caret Naïve Bayes and Laplace and larger dataset | Model name: malNBModel4  Accuracy: 0.60  (folds: 0.57-0.66)  Recall: 0.46  Precision: 0.67  Kappa: 0.14  (folds: 0.02-0.24) |  |  |  |
| **Logistic Regression** | Normal split, binomial glm | Model name: malLRModel  Accuracy: 0.64  Recall: 0.30  Precision: 0.84  Kappa: 0.15 | Model name: stuntLRModel  Accuracy: 0.66  Recall: 0.14  Precision: 0.92  Kappa: 0.07 | Model name: wastLRModel  Accuracy: 0.92  Recall: 0.00  Precision: 0.998  Kappa: -0.004 | Model name: underLRModel  Accuracy: 0.858  Recall: 0.00  Precision: 0.998  Kappa: -0.004 |
| Stratified 10-fold cross validation, binomial glm | Model name: malLRModel2  Accuracy: 0.64  (folds: 0.60-0.71)  Recall: 0.30  Precision: 0.84  Kappa: 0.15  (folds: 0.06-0.30) | Model name: stuntLRModel2  Accuracy: 0.66  (folds: 0.64-0.70)  Recall: 0.14  Precision: 0.92  Kappa: 0.07  (folds: 0.06-0.25) | Model name: wastLRModel2  Accuracy: 0.92  (folds: 0.91-0.93)  Recall: 0.00  Precision: 0.998  Kappa: -0.004  (folds: -0.03-0.31) | Model name: underLRModel2  Accuracy: 0.85  (folds: 0.83-0.85)  Recall: 0.00  Precision: 0.998  Kappa: -0.004  (folds: -0.03-0.08) |
| Stratified 10-fold cross validation, binomial glm and larger dataset | Model name: malLRModel3  Accuracy: 0.64  (folds: 0.61-0.69)  Recall: 0.26  Precision: 0.84  Kappa: 0.12  (folds: 0.07-0.24) |  |  |  |
| Stratified 10-fold cross validation, binomial glm and larger dataset with fewer variables | Model name: malLRModel4  Accuracy: 0.65  (folds: 0.61-0.68)  Recall: 0.17  Precision: 0.91  Kappa: 0.10  (folds: 0.03-0.19) |  |  |  |
| **Decision Tree** | Normal split, rpart tree | Model name: malDTModel  Accuracy: 0.64  Recall: 0.23  Precision: 0.87  Kappa: 0.12 | Model name: stuntDTModel  Accuracy: 0.67  Recall: 0.05  Precision: 0.98  Kappa: 0.04 | Model name: wastDTModel  Accuracy: 0.92  Recall: 0.03  Precision: 0.99  Kappa: 0.03 | Model name: underDTModel  Accuracy: 0.85  Recall: 0.00  Precision: 1.0  Kappa: 0.00 |
| Stratified 10-fold cross validation, rpart/caret tree | Model name: malDTModel2  Accuracy: 0.64  (folds: 0.56-0.66)  Recall: 0.23  Precision: 0.87  Kappa: 0.12  (folds: -0.05-0.18) | Model name: stuntDTModel2  Accuracy: 0.68  (folds: 0.64-0.69)  Recall: 0.19  Precision: 0.92  Kappa: 0.13  (folds: 0.0-0.19) | Model name: wastDTModel2  Accuracy: 0.92  (folds: 0.90-0.93)  Recall: 0.03  Precision: 0.99  Kappa: 0.03  (folds: -0.04-0.31) | Model name: underDTModel2  Accuracy: 0.85  (folds: 0.81-0.85)  Recall: 0.00  Precision: 1.0  Kappa: 0.00  (folds: -0.07-0.0) |