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| --- | --- | --- | --- | --- | --- | --- | --- |
| **4 Classes with 10 Attributes** | | | | | | | |
| **Machine Learning Model** | **Accuracy Testing** | **Accuracy Training** | **Distribution** | **F-1 “Poor”** | **F-1 “Average”** | **F-1 “Good”** | **F-1 “Successful”** |
| MultiClass Classification Logistic Regression | 49.23% | 29.43% | * Poor: 4469 * Average: 11847 * Good: 24008 * Successful: 9533 | 5% | 14% | 65% | 20% |
| MultiClass Classification Logistic Regression –  **Naive Random Oversampling** | 43.32% (Balanced) | 44.41% (Balanced) | * Poor: 18006 * Average: 18006 * Good: 18006 * Successful: 18006 | 33% | 31% | 38% | 40% |
| MultiClass Classification Logistic Regression –  **SMOTE Oversampling** | 42.29% (Balanced) | 43.42% (Balanced) | * Poor: 18006 * Average: 18006 * Good: 18006 * Successful: 18006 | 32% | 34% | 39% | 37% |
| MultiClass Classification Logistic Regression –  **Cluster Centroids Undersampling** | 40.07% (Balanced) | 40.48% (Balanced) | * Poor: 3352 * Average: 3352 * Good: 3352 * Successful: 3352 | 29% | 28% | 24% | 27% |
| MultiClass Classification Logistic Regression –  **SMOTEEN, Combination of Over- and Under-Sampling** | 41.89% (Balanced) | 42.56% (Balanced) | * Poor: 1250 * Average: 1441 * Good: 3072   Successful: 3559 | 32% | 22% | 51% | 38% |
| Balanced Random Forest | 40.25% (Balanced) | 57.44% (Balanced) | * Poor: 4469 * Average: 11847 * Good: 24008 * Successful: 9533 | 29% | 27% | 37% | 36% |
| Easy Ensemble AdaBoost Classifier | 42.81% (Balanced) | 44.24% (Balanced) | * Poor: 4469 * Average: 11847 * Good: 24008 * Successful: 9533 | 33% | 30% | 45% | 39% |