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| --- | --- | --- | --- | --- | --- | --- | --- |
| **4 Classes with 15 Attributes and Census Data** | | | | | | | |
| **Machine Learning Model** | **Accuracy Testing** | **Accuracy Training** | **Distribution** | **F-1 “Poor”** | **F-1 “Average”** | **F-1 “Good”** | **F-1 “Successful”** |
| MultiClass Classification Logistic Regression | 56.66% | 56.67% | * Poor: 1014 * Average: 4820 * Good: 14021 * Successful: 4884 | 0% | 0% | 72% | 0% |
| MultiClass Classification Logistic Regression –  **Naive Random Oversampling** | 35.06% (Balanced) | 33.94% (Balanced) | * Poor: 10516 * Average: 10516 * Good: 10516 * Successful: 10516 | 14% | 25% | 49% | 21% |
| MultiClass Classification Logistic Regression –  **SMOTE Oversampling** | 32.59% (Balanced) | 29.44% (Balanced) | * Poor: 10516 * Average: 10516 * Good: 10516 * Successful: 10516 | 12% | 24% | 44% | 20% |
| MultiClass Classification Logistic Regression –  **Cluster Centroids Undersampling** | 30.34% (Balanced) | 21.17% (Balanced) | * Poor: 760 * Average: 760 * Good: 760 * Successful: 760 | 10% | 24% | 27% | 21% |
| MultiClass Classification Logistic Regression –  **SMOTEEN, Combination of Over- and Under-Sampling** | 26.63% (Balanced) | 5.92% (Balanced) | * Poor: 6992 * Average: 3106 * Good: 1124   Successful: 2741 | 8% | 0% | 0% | 13% |
| Balanced Random Forest | 49.58% (Balanced) | 71.77% (Balanced) | * Poor: 1014 * Average: 4820 * Good: 14021 * Successful: 4884 | 25% | 37% | 44% | 45% |
| Easy Ensemble AdaBoost Classifier | 47.99% (Balanced) | 48.95% (Balanced) | * Poor: 1014 * Average: 4820 * Good: 14021 * Successful: 4884 | 22% | 32% | 42% | 44% |