|  |  |  |  |
| --- | --- | --- | --- |
| predicted |  | actual | |
|  | **> 50,000** | **<= 50,000** |
| **> 50,000** | **tp**  (“hit”) | **fp**  (“Type I Error”) |
| **<= 50,000** | **fn**  (“hit”) | **tn**  (“Type I Error”) |
| fp = Type I Error | | |
| fn = Type II Error | | |

**Results for four attributes:**

|  |  |  |  |
| --- | --- | --- | --- |
| predicted |  | actual | |
|  | **> 50,000** | **<= 50,000** |
| **> 50,000** | 10306 | 3286 |
| **<= 50,000** | 6079 | 21029 |
| fp = Type I Error | | |
| fn = Type II Error | | |

**Results for all attributes:**

|  |  |  |  |
| --- | --- | --- | --- |
| predicted |  | actual | |
|  | **> 50,000** | **<= 50,000** |
| **> 50,000** | 10969 | 2312 |
| **<= 50,000** | 4672 | 22747 |
| fp = Type I Error | | |
| fn = Type II Error | | |

**10 trials for each case, training set each trial = 10%**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Predicting > 50k** | | **Predicting <= 50k** | |
|  | **Four attributes** | **All attributes** | **Four attributes** | **All attributes** |
| **Precision 🡪 tp/(tp+fp)** | .758 | .826 | .776 | .830 |
| **SENSITIVITY: true positive rate 🡪 tp/(tp+fn)** | .629 | .701 | .865 | .907 |
| **SPECIFICITY: true negative rate 🡪 tn/(tn+fp)** | .865 | .907 | .629 | .701 |
| **Accuracy🡪 (tp+tn)/(tp + tn + fp + fn)** | .770 | .830 | .770 | .830 |
| **False positive rate 🡪 fp/(fp+tn)** | .135 | .092 | .371 | .299 |