Classification

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dataset | Dataset Shape | Source | Target Class | Model Used | Training Accuracy | Testing Accuracy |
| Burt’s Reading Test Data | 39676x7 | Source1 | Performance  (Severe, Mild, Average, Good, Well) | Deep Neural Network | 98.59% | 96.67% |
| Schonell’s Spelling Test Data | 33936x7 | Source1 | Performance  (Severe, Mild, Average, Good, Well) | Deep Neural Network | 98.74% | 95.77% |
| Wepman’s Auditory Discrimination Test Data | 80x3 | Source2 | Auditory Disability  (Yes, No) | SVM Classifier | 100% | 97.60% |
| Comprehensive Understanding  Test Data | 246x4 | Source2 | Comprehensive Understanding Difficulty  (Yes, Mild, No) | Ensemble Model 3 | 100% | 99.67% |
| Auditory Sequential Memory  (Digit Span) Data | 3360x7 | Source2 | Performance  (Severe, Mild, Average, Good, Well) | Decision Tree Classifier | 100% | 96.40% |

1 UK Mental Health Services and Learning Disability Services (Online Data Source)

2 Archives of Canary International School, Ambitus International School, GIIS (Global Indian International School), Hyderabad (Offline Private Data Sources)

3 (SVM Classifier, Logistic Regression, Decision Tree Classifier, KNN Classifier)

Regression

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dataset | Dataset Shape | Source | Target | Model Used | Training  RMSE | Testing  RMSE |
| Burt’s Reading Test Data | 39676x7 | Source1 | Reading Age  (in months) | Deep Neural Network | 0.72 | 1.24 |
| Schonell’s Spelling Test Data | 33936x7 | Source1 | Spelling Age  (in months) | Deep Neural Network | 0.63 | 0.82 |
| Auditory Sequential  Memory  (Digit Span) Data | 3360x7 | Source2 | ASM Age  (in months) | Decision Tree Regressor | 0.84 | 1.87 |

1 UK Mental Health Services and Learning Disability Services (Online Data Source)

2 Archives of Canary International School, Ambitus International School,

GIIS (Global Indian International School), Hyderabad (Offline Private Data Sources)