**Table 4: Residual Analysis**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Scheduled Duration** | **Neural Network** | **Linear Regression** | **Ridge Regression** | **Lasso Regression** | **Random Forest** | **GBM** | **XGBoost** |
| Mean residual, minutes ± SD | -18.52 ± 36.72 | -0.37 ± 40.05 | -1.72 ± 40.47 | -2.05 ± 40.20 | -2.13 ± 40.92 | -2.69 ± 44.95 | -2.67 ± 44.87 | -2.63 ± 44.94 |
| Median residual, minutes ± IQR | -19.00 ± 39.00 | -3.69 ± 37.20 | -4.52 ± 47.15 | -4.66 ± 47.18 | -4.83 ± 46.96 | -4.84 ± 37.82 | -5.62 ± 38.73 | -5.84 ± 38.59 |
| t-statistic | -52.956 | -0.960 | -6.155 | -6.294 | -6.242 | -4.455 | -5.456 | -5.346 |
| p-value | 0.00e+00\*\* | 3.37e-01 | 7.75e-10\*\* | 3.22e-10\*\* | 4.48e-10\*\* | 8.47e-06\*\* | 4.97e-08\*\* | 9.17e-08\*\* |

Abbreviations: GDM, gradient boost machine; SD, standard deviation; IQR, interquartile range Comparison of residuals for different models using t-test. Significance levels are indicated by ∗(*p <* 0*.*05) and ∗∗ (*p <* 0.01).