**Model Performances**

**Performance Matrix: R2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. no.** | **Model** | **4\_cluster**  **With outliers** | **4\_cluster**  **Without outliers** | **3\_cluster**  **With outliers** | **3\_cluster**  **Without outliers** |
| 1 | Linear regg | 0.7079 | 0.7220 | 0.7214 | 0.7134 |
| 2 | Lin regg k fold | 0.63 | 0.65 | 0.61 | 0.64 |
| 3 | Ridge | 0.7113 | 0.7214 | 0.7212 | 0.7137 |
| 4 | Ridge cv | 0.6352 | 0.6458 | 0.6121 | 0.6414 |
| 5 | Lasso | 0.5918 | 0.60399 | 0.5918 | 0.60399 |
| 6 | Lasso cv | 0.6342 | 0.6454 | 0.6120 | 0.6406 |
| 7 | Elastic net | 0.5031 | 0.5252 | 0.5064 | 0.5270 |
| 8 | Elastic net cv | 0.6338 | 0.6456 | 0.6120 | 0.64064 |
| 9 | 7\_NN | 0.7148 | 0.7235 | 0.7157 | 0.73015 |
| 10 | SVM | 0.6222 | 0.6061 | 0.6228 | 0.6060 |
| 11 | Random forest | 0.7855 | 0.7377 | 0.7879 | 0.7369 |
| 12 | Voting | 0.7389 | 0.7286 | 0.7473 | 0.7237 |
| 13 | Bagging | 0.7714 | 0.7242 | 0.7589 | 0.7138 |
| 14 | Gradient boosting | 0.7516 | 0.7363 | 0.7661 | 0.7271 |
| 15 | XGB | 0.7684 | 0.7465 | 0.7707 | 0.7648 |
| 16 | XGB cv | 0.6847 | 0.6699 | 0.6825 | 0.6679 |
| 17 | Stacking | 0.7702 | 0.6583 | 0.7821 | 0.6056 |