1.Using Decision Tree algorithm, to Find which model is best in Maching Learning

Best Model is **criterion=absolute, splitter=best, max\_depth=auto,R\_score=**0.969180643 for this Dataset.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **criterion** | **splitter** | **Max\_Depth** | **R\_Score** |
| 1 | squared\_error | best | None | 0.909448111 |
| 2 | squared\_error | best | auto | 0.911386266 |
| 3 | squared\_error | Best | sqrt | 0.609555645 |
| 4 | squared\_error | Best | log2 | 0.245465383 |
| 5 | squared\_error | random | None | 0.823314435 |
| 6 | squared\_error | random | auto | 0.887524163 |
| 7 | squared\_error | random | Sqrt | 0.743148623 |
| 8 | squared\_error | random | log2 | 0.573950643 |
| 9 | friedman\_mse | best | None | 0.893010665 |
| 10 | friedman\_mse | best | auto | 0.921451961 |
| 11 | friedman\_mse | best | sqrt | 0.728888256 |
| 12 | friedman\_mse | best | log2 | 0.711282592 |
| 13 | friedman\_mse | random | None | 0.846505166 |
| 14 | friedman\_mse | random | auto | 0.91780669 |
| 15 | friedman\_mse | random | sqrt | 0.796438014 |
| 16 | friedman\_mse | random | log2 | 0.16119981 |
| 17 | absolute\_error | best | None | 0.961074283 |
| 18 | absolute\_error | best | auto | 0.969180643 |
| 19 | absolute\_error | best | sqrt | 0.407611569 |
| 20 | absolute\_error | best | log2 | 0.806541652 |
| 21 | absolute\_error | random | None | 0.735750266 |
| 22 | absolute\_error | random | auto | 0.864124907 |
| 23 | absolute\_error | random | sqrt | -0.50474268 |
| 24 | absolute\_error | random | log2 | -0.119378499 |
| 25 | poisson | best | None | 0.928825881 |
| 26 | poisson | best | auto | 0.947262286 |
| 27 | poisson | best | sqrt | 0.536911402 |
| 28 | poisson | best | log2 | 0.778821362 |
| 29 | poisson | random | None | 0.85119329 |
| 30 | poisson | random | auto | 0.887334168 |
| 31 | poisson | random | sqrt | 0.774402107 |
| 32 | poisson | random | log2 | 0.529446503 |