

R² VALUES FOR DIFFERENT MLR ALGORITHMS AND PARAMETERS

1. Multiple Linear Regression:

R² Value = 0.9358680970046243

2. Support Vector Machine:

| Model No | Kernel | C | R ² Value |
|----------|-------------|--------|-----------------------|
| 1 | rbf | 1.0 | -0.057418393916219834 |
| 2 | linear | 1.0 | -0.05569157045504447 |
| 3 | poly | 1.0 | -0.05710387514922144 |
| 4 | sigmoid | 1.0 | -0.057209358534722865 |
| 5 | precomputed | 1.0 | Error |
| 6 | rbf | 1000.0 | 0.0067683444800727965 |
| 7 | linear | 1000.0 | 0.7802839882154124 |
| 8 | poly | 1000.0 | 0.26616370931646915 |
| 9 | sigmoid | 1000.0 | 0.18506861974160804 |
| 10 | precomputed | 1000.0 | Error |

3. Decision Tree

| Model No | criterion | splitter | max_features | R ² Value |
|----------|----------------|----------|--------------|----------------------|
| 1 | squared_error | best | None | 0.9139890699151374 |
| 2 | friedman_mse | best | None | 0.9197118169513562 |
| 3 | absolute_error | best | None | 0.9389205310664194 |
| 4 | poisson | best | None | 0.9132579966761437 |
| 5 | squared_error | random | None | 0.850575425865816 |
| 6 | friedman_mse | random | None | 0.9502630478415544 |
| 7 | absolute_error | random | None | 0.7066381776130207 |
| 8 | poisson | random | None | 0.9042366778486678 |
| 9 | squared_error | best | sqrt | 0.2171090767296211 |
| 10 | friedman_mse | best | sqrt | 0.9136448199893716 |
| 11 | absolute_error | best | sqrt | -0.11724868067940886 |
| 12 | poisson | best | sqrt | 0.8599468401052571 |
| 13 | squared_error | best | log2 | 0.48938881022366065 |
| 14 | friedman_mse | best | log2 | 0.6782148102743986 |
| 15 | absolute_error | best | log2 | 0.727347400548414 |
| 16 | poisson | best | log2 | 0.7784046536026026 |
| 17 | squared_error | random | sqrt | 0.759256088859394 |
| 18 | friedman_mse | random | sqrt | 0.40321616824875184 |
| 19 | absolute_error | random | sqrt | 0.22533589316082148 |
| 20 | poisson | random | sqrt | 0.038362185731217746 |
| 21 | squared_error | random | log2 | 0.6231716570982742 |
| 22 | friedman_mse | random | log2 | 0.7472656074662707 |

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|----|----------------|--------|------|--------------------|
| 23 | absolute_error | random | log2 | 0.3968890212885652 |
| 24 | poisson | random | log2 | 0.4742531277015627 |