Model Performance Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | Training Time (s) | Prediction Time (s) | Mean Squared Error | R² Score |
| Support Vector Regressor | 37.0543 | 18.4642 | 55.348461 | 0.542302 |
| Lasso Regression | 0.071 | 0.0026 | 115.664884 | 0.698787 |
| Ridge Regression | 0.012 | 0.0026 | 91.68727 | 0.682499 |
| Linear Regression | 0.0233 | 0.0035 | 83.524419 | 0.663746 |
| KNeighbors Regressor | 0.1049 | 0.1571 | 105.808966 | 0.668849 |
| **LightGBM** | **0.2728** | **0.0095** | **0.00026748** | **0.99999742** |
| Random Forest Regressor | 2.5911 | 0.0581 | 9.013647945 | 0.999976218 |

| **Vehicle Type** | **Full Toll (INR)** | **Toll per km (approx.)** |
| --- | --- | --- |
| **Cars and Jeeps** | 320 | 3.37 |
| **Minibuses and Tempos** | 495 | 5.21 |
| **Two-Axle Trucks** | 685 | 7.21 |
| **Buses** | 940 | 9.89 |
| **Three-Axle Trucks** | 1,630 | 17.16 |
| **Multi-Axle Trucks and Machinery Vehicles** | 2,165 | 22.79 |