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| --- | --- | --- | --- |
| **Identifier** | **Metric** | **Equation** |  |
| MAE | Mean absolute error |  |  |
| MSE | Mean squared error |  |  |
| MAPE | Mean absolute percentage error |  |  |
| R2 | R squared |  |  |
|  |  |  |  |

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| **Identifier** | **Metric** | **Equation** | **Advantages and disadvantages** |  |
| MAE | Mean absolute error |  | * Useful if the training data has outliers * All the errors are weighted on the same scale * Not differentiable at zero |  |
| MSE | Mean squared error |  | * Serves as a heuristic for training models * Does not penalize the errors as much as MSE does * Is dependent on the scale of the data * Too sensitive to outliers * Increases with an increase in the size of the test sample |  |
| MAPE | Mean absolute percentage error |  | * Is independent of the scale of the variables * All errors are normalized on a common scale * Penalizes negative errors more than positive errors |  |
|  |  |  |  |  |

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| Model\Performance measurement | **MSE** | **RR** | **MAE** | **MAPE** |
| MAE | 284.2620 | 0.9294 | 6.4921 | 15.4087 |
| AE | 274.5918 | 0.9312 | 6.3981 | 11.0444 |
| DAE | 274.5249 | 0.9304 | 6.4014 | 10.6129 |
| VAE | 338.3720 | 0.7331 | 8.0319 | 16.5869 |
| MVAE | 393.8235 | 0.8581 | 7.6866 | 9.8758 |
| Integrated | **0.2739** | **0.9993** | **0.2790** | **2.1873** |
|  |  |  |  |  |