Coronavirus Analysis in West Bengal

Coronavirus in West Bengal (Day To Day)

==> *The Infant Mortality Rate (IFR) and Crude Mortality Rate (CMR) in West Bengal as follows :*

IFR = 3.2461.
CMR = 0.000876.

CORRELATION HEAT MAP:

correlation is a measure of how strongly one variable depends on another. Consider a hypothetical dataset containing information about professionals in the software indutry. Correlation can be an important tool for feature engineering in building machine learning models.


	Cured	Deaths	Confirmed
Cured	1.000000	0.933587	0.987869
Deaths	0.933587	1.000000	0.972419
Confirmed	0.987869	0.972419	1.000000
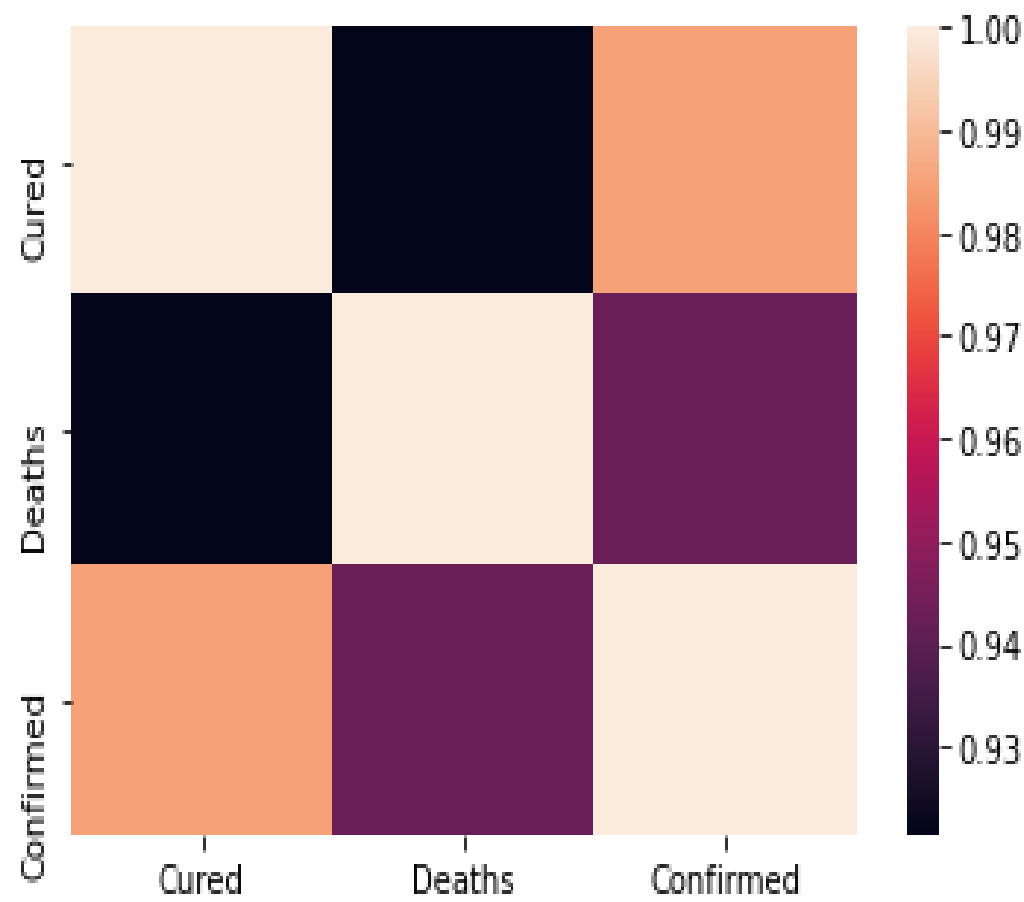
BUILDING A MODEL USING PREDICTIVE ANALYSIS:

In statistics, linear regression is a linear approach to modeling the relationship between a scalar response and one or more explanatory variables. The case of one explanatory variable is called simple linear regression. For more than one explanatory variable, the process is called multiple linear regression.

In statistics, the coefficient of determination, denoted R^2 or r^2 and pronounced "R squared", is the proportion of the variance in the dependent variable that is predictable from the independent variable.
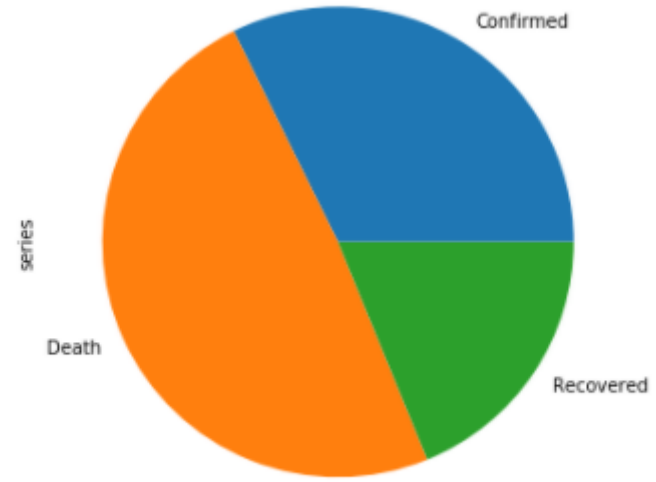
Recovered / Confirmed

```
# Prediction analysis of Recovered Cases.
from sklearn.metrics import r2_score
r2_score(y_test,y_pred)
```

0.9681969072412739

```
# Prediction analysis of Recovered Cases.
from sklearn.metrics import r2_score
r2_score(y_test,y_pred)
```

0.9284341267855505

BUILDING A CLASSIFIER:

A classification problem is when the output variable is a category, such as "red" or "blue" or "disease" and "no disease". A classification model attempts to draw some conclusion from observed values. Given one or more inputs a classification model will try to predict the value of one or more outcomes.

In k-NN classification, the output is a class membership. An object is classified by a plurality vote of its neighbors, with the object being assigned to the class most common among its k nearest neighbors (k is a positive integer, typically small). If k = 1, then the object is simply assigned to the class of that single nearest neighbor.

```python
from sklearn import metrics
print("Train set Accuracy: ", metrics.accuracy_score(y_train, beside.predict(X_train)))
print("Test set Accuracy: ", metrics.accuracy_score(y_test, yhat))
```

```
Train set Accuracy:  0.9854147675478578
Test set Accuracy:  0.48884165781083955
```

Predictive Cases.

```python
beside.predict([[0, 34,2,4,2,2]])
```

```
array(['1'], dtype=object)
```

```python
beside.predict([[0, 32,5,3,4,2]])
```

```
array(['0'], dtype=object)
```