Covid-19 Analysis in Tamilnadu

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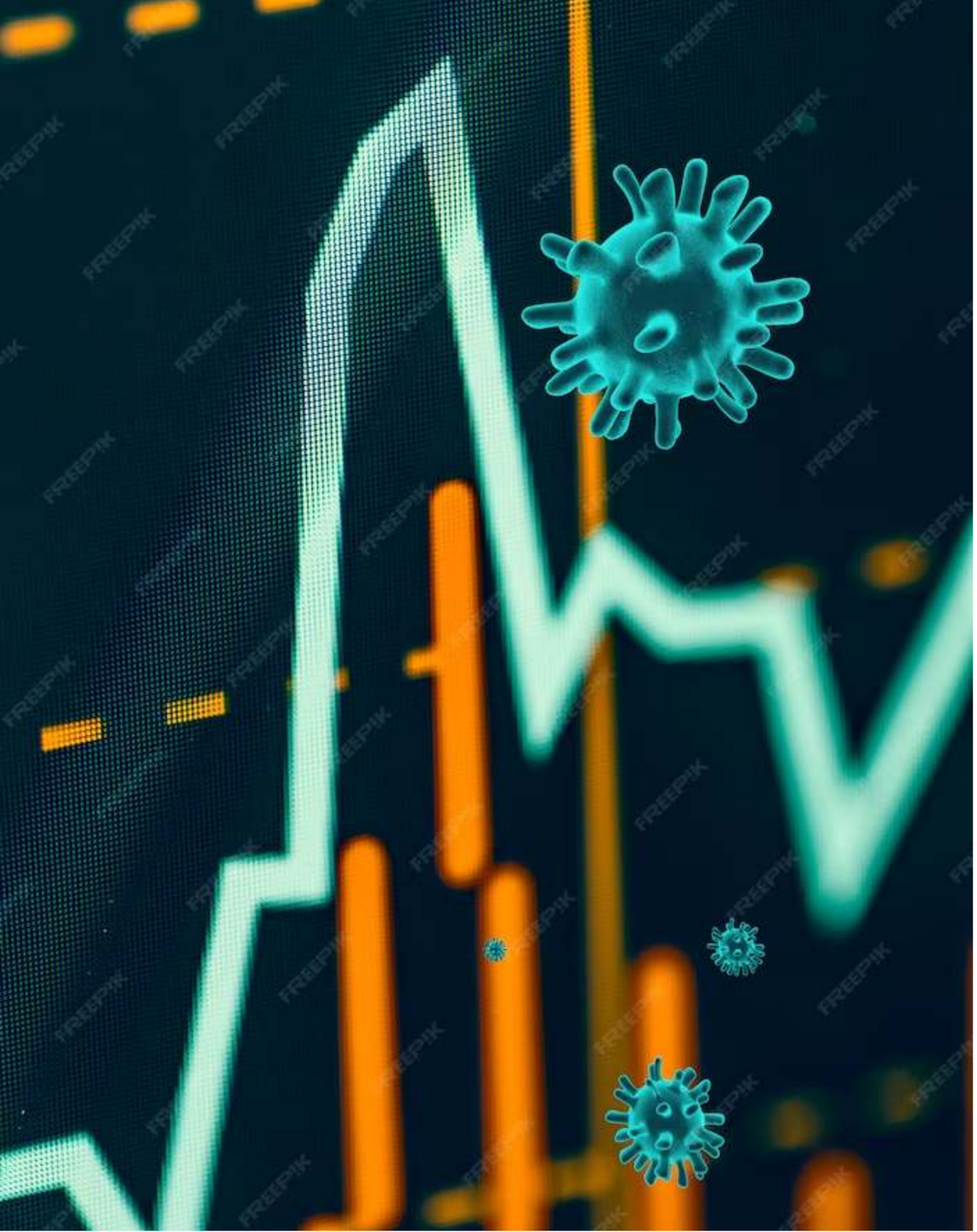
Introduction

COVID-19 has affected the world in unprecedented ways. This presentation focuses on the **data science analysis** of COVID-19 in **Tamil Nadu**. We will explore the trends, patterns, and insights that can be gleaned from the data.

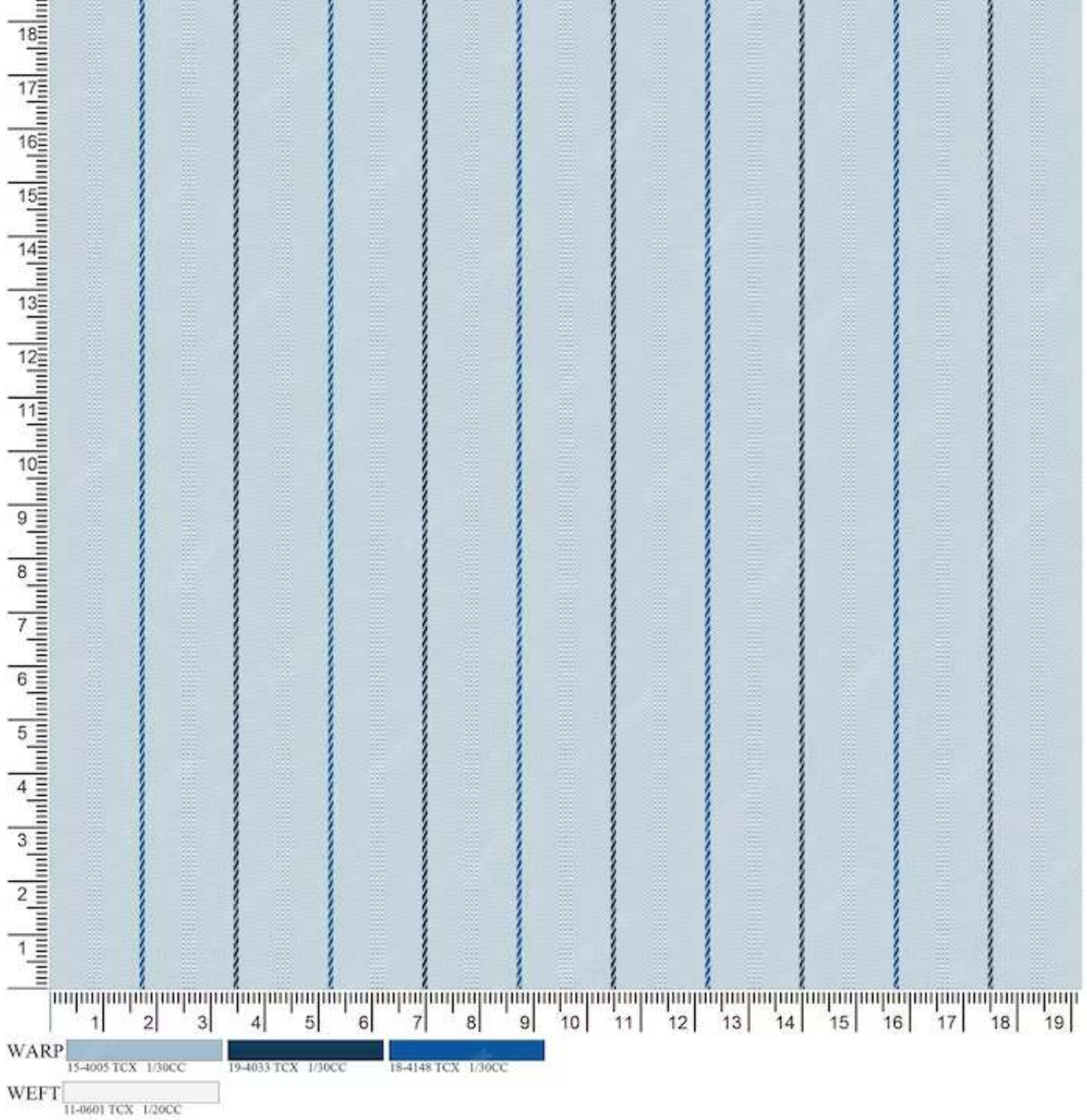


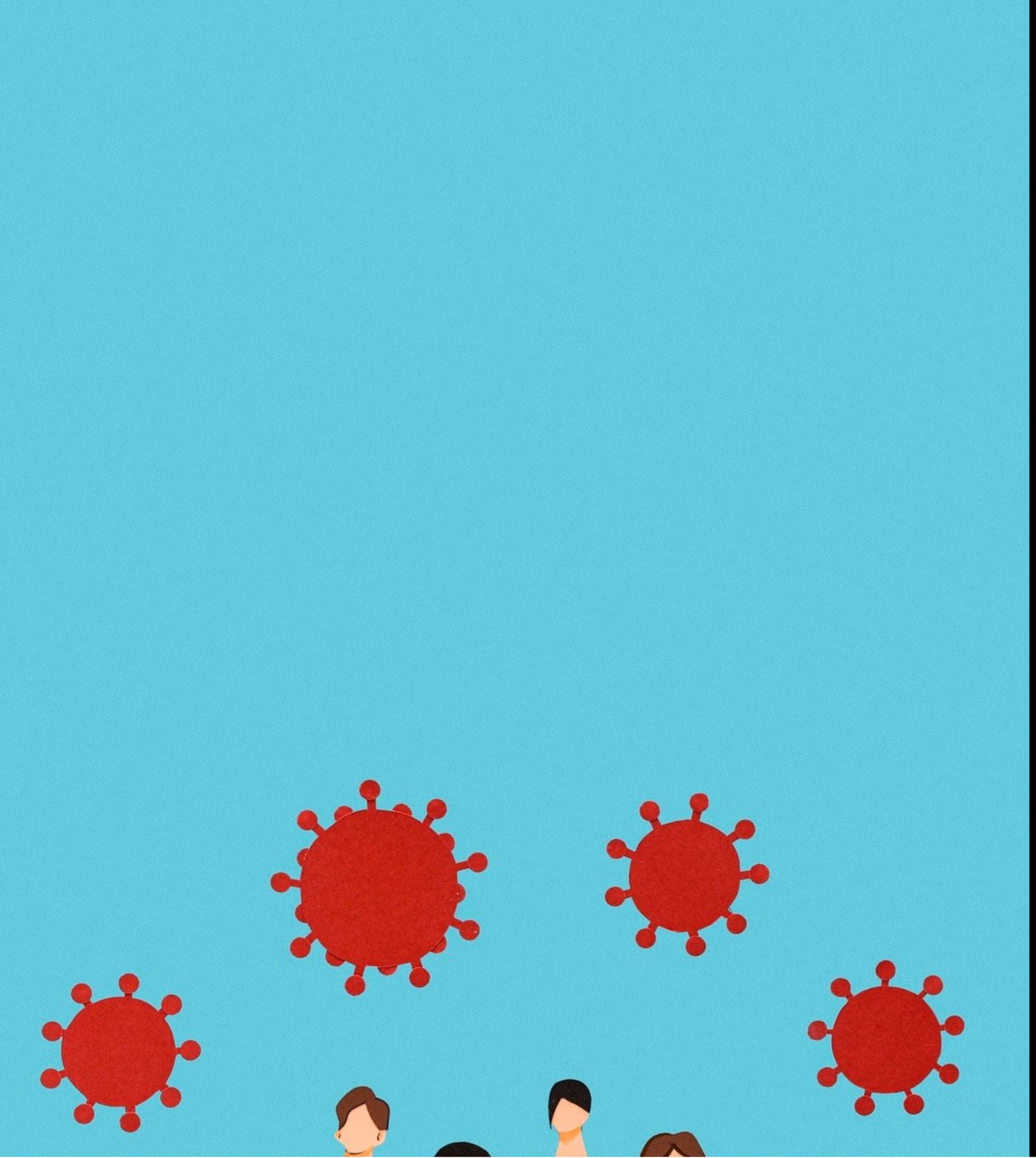
COVID-19 Cases in Tamil Nadu

This slide shows the **total number of COVID-19 cases** in Tamil Nadu, as well as the **daily new cases**. The data is sourced from the Tamil Nadu Health Department. The graph shows the **trend** of COVID-19 cases in Tamil Nadu over time.

COVID-19 Testing in Tamil Nadu

This slide shows the **testing data** for COVID-19 in Tamil Nadu. We will explore the **testing trends**, **positivity rate**, and **testing capacity** in Tamil Nadu. The data is sourced from the Tamil Nadu Health Department.





COVID-19 Demographics in Tamil Nadu

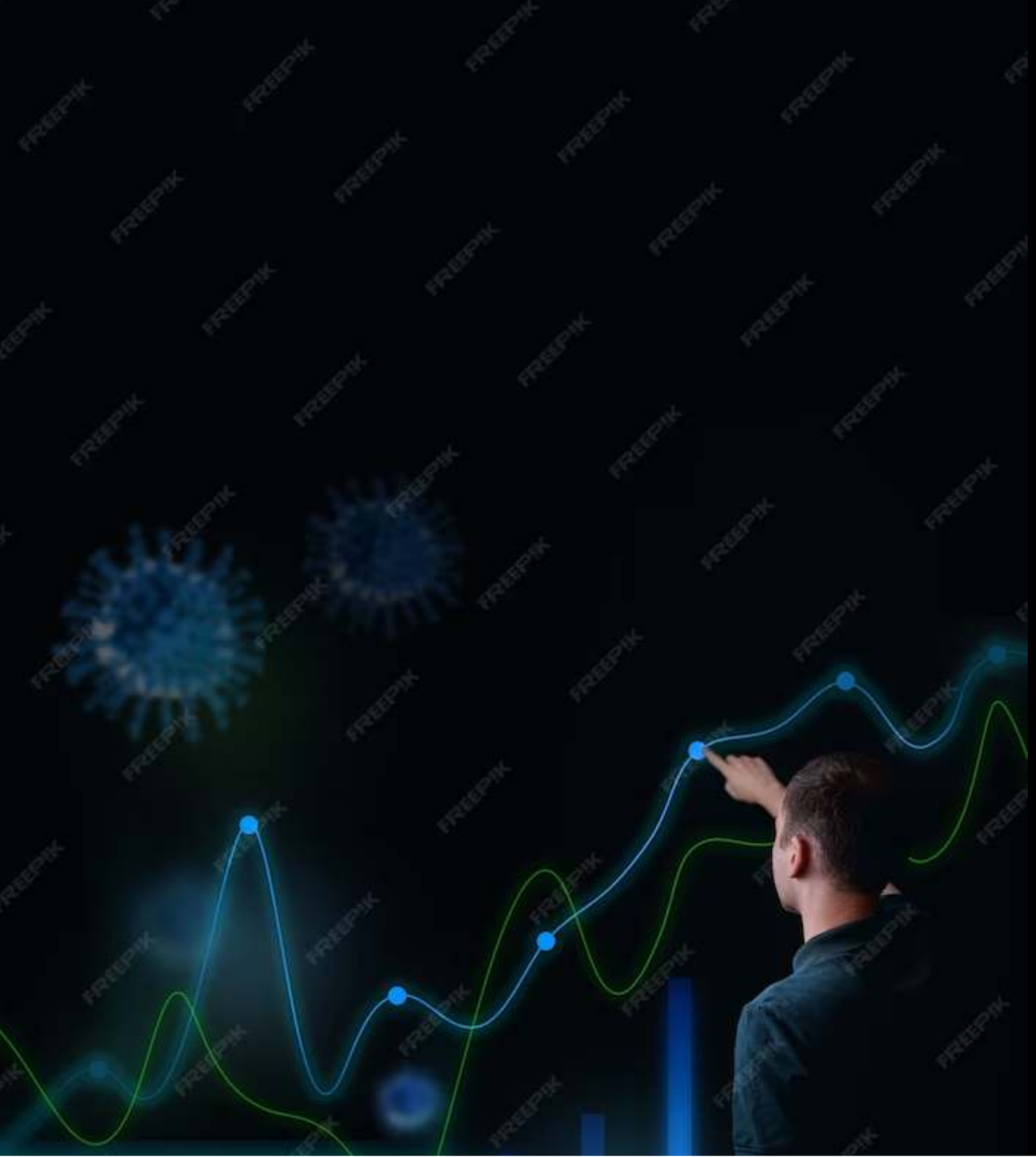
This slide explores the **demographics** of COVID-19 cases in Tamil Nadu. We will look at the **age**, **gender**, and **location** of COVID-19 cases in Tamil Nadu. The data is sourced from the Tamil Nadu Health Department.

COVID-19 Mortality in Tamil Nadu

This slide explores the **mortality** of COVID-19 in Tamil Nadu. We will look at the **age**, **gender**, and **comorbidities** of COVID-19 deaths in Tamil Nadu. The data is sourced from the Tamil Nadu Health Department.

COVID-19 Vaccination in Tamil Nadu

This slide explores the **vaccination** data for COVID-19 in Tamil Nadu. We will look at the **vaccination rate**, **vaccination centers**, and **vaccination priority groups** in Tamil Nadu. The data is sourced from the Tamil Nadu Health Department.



COVID-19 Projections in Tamil Nadu

This slide shows the **projections** for COVID-19 in Tamil Nadu. We will explore the **future trend** of COVID-19 cases in Tamil Nadu, based on the current data. The projections are based on a **data science model**.

METHODS AND MATERIALS

Modelling

The First step to the modelling process is the implementation of the modelling software, this research uses Artificial Neural Network to determine the input and output of the model. Preprocessing of data, removing errors in data and dividing for training, validation and evaluation has to be done to get better results. After this data is ready to be implemented in ANN.

Validation

The second step involves the validation of the model. It will define the quality of the model and the response as the training process when completed. A prepared set of the input and output data were used to validate the model and the data response is compared with modelled and measured.

Evaluation

The third step is to evaluate the model, with the response of training or validation process.

- Mean Squared Error (MSE),
- Root Mean Squared Error (RMSE),
- Mean Absolute Error (MAE),
- Mean Squared Relative Error (MSRE),
- Coefficient of Determination (R2),
- Index of Agreement,
- Percentage to BIAS (PBIAS),

Conclusion

In conclusion, this presentation has explored the **data science analysis** of COVID-19 in Tamil Nadu. We have uncovered trends, patterns, and insights that can help us understand the impact of COVID-19 in Tamil Nadu. We hope this presentation has been informative and helpful.