

# **AIR QUALITY ANALYSIS AND PREDICTION IN TAMIL NADU.**

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# ABSTRACT



**The economic and social impact of poor air quality in towns and cities is increasingly being recognised, together with the need for effective ways of creating awareness of realtime air quality levels and their impact on health.**


# EXISTING SYSTEM

- ➔ **Currently, computational intelligence approaches involve use of smart algorithms such as decision trees, neural networks, self-organizing maps, support vector machines etc. in predicting air quality. This method is advantageous because of its high accuracy and computational efficiency.**

# AIM

- ➔ **The objective of study is to implement air quality prediction with machine learning algorithms namely logistic regression and deep learning techniques such as Neural Network**

# SYSTEM ARCHITECTURE

 **A system architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system.**

# S/W & H/W REQUIREMENT

## **HARDWARE**

Hard Disk

Input device

Output device

## **SOFTWARE**

Operating System

Programming Windows

Windows Family

# LITERATURE SURVEY


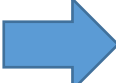
- ➔ **An Extended Spatiotemporal Granger Causality for Air Quality Estimation with Heterogeneous Urban**  
**J. Y. Zhu, C and V. D. K. IL "An Extended Spatio-Temporal Granger Causality Model for Air Quality Estimation with Heterogeneous Big Data in IEEE Transactions Big Data**



# **DATASET DETAILS**

→ **This data is a clear version of the clay Ambient Air Quality  
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Dulaang and Ay Polic**

# **PROBLEM STATEMENT AND DEFINITION**

-  **Air pollution type prediction is considered as the problem. The attributes used for this problem are SO<sub>2</sub>, NO<sub>2</sub>, RSPM, SPM are considered for air pollution type prediction**
-  **Air quality is an important measure to be monitored in every location of the city and other regions such as industrial areas.**

# CONCLUSION

- ➔ **The proposed approach for Air quality prediction based on meteorological and historical pollutant data. This is done using a model based on the previous meteorological data. Machine learning algorithm Logistic regression is used for prediction. Also deep learning approach is used Neural Network for air quality prediction. In this experimental results, logistic regression predicts with accuracy of 66% and neural network predicts with accuracy of 61%**