

TIME SERIES PREDICTION

COMPARITIVE STUDY OF MACHINE LEARNING, ARIMA AND NEURAL NETWORKS

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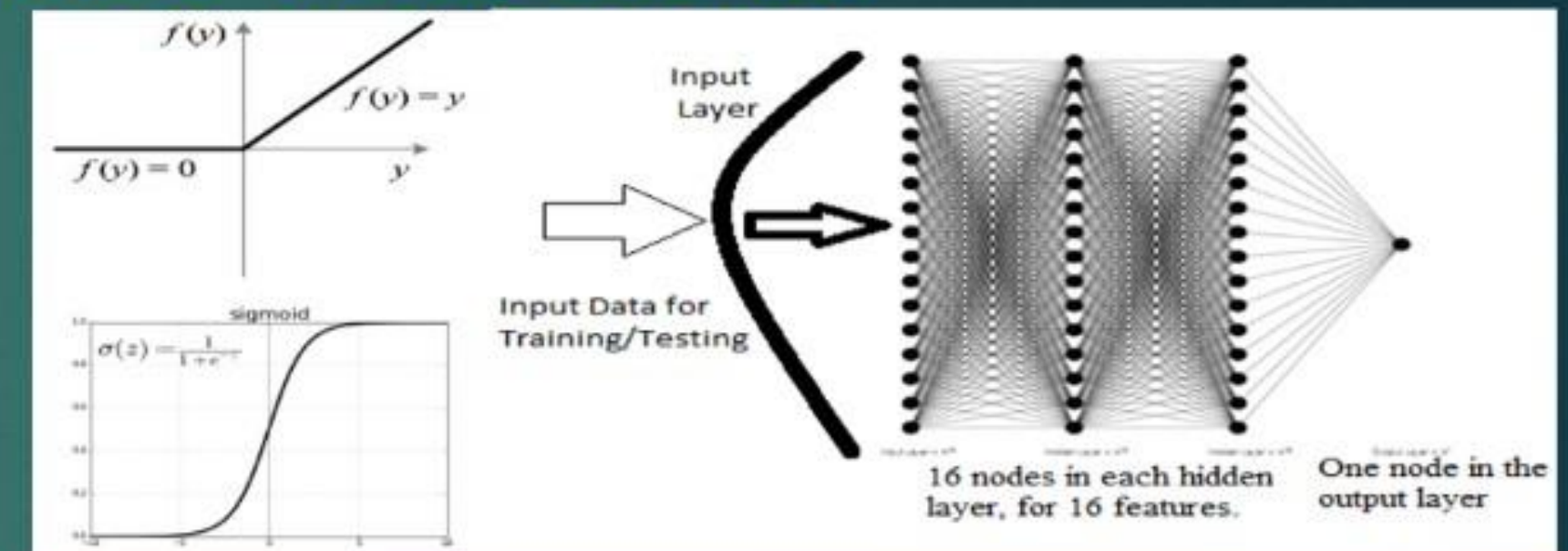
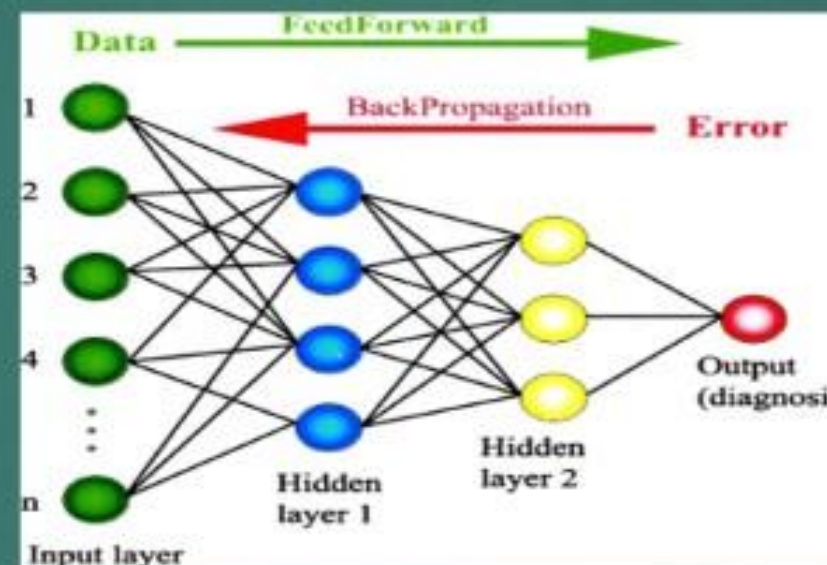
OBJECTIVE

To predict future trends from past data using machine learning, ARIMA modelling and Deep Learning for three varied use cases.

ALGORITHMS TESTED

- Linear Regression
- K-Means Clustering
- Logistic Regression
- ARIMA – Auto Regressive Integrated Moving Average
- Artificial Neural Network (ANN)
- Recurrent Neural Network (RNN) – Long-Short Term Memory(LSTM)

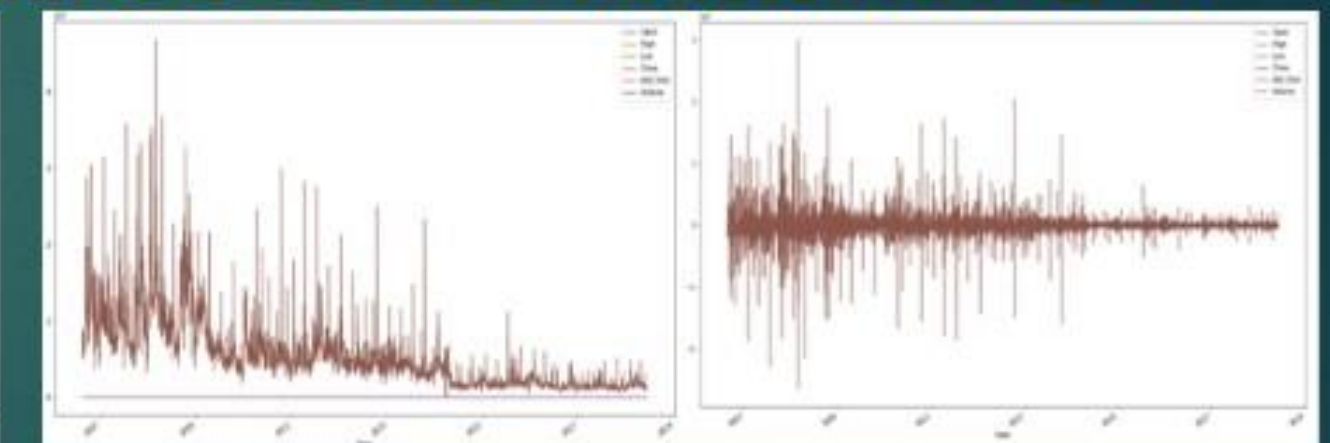
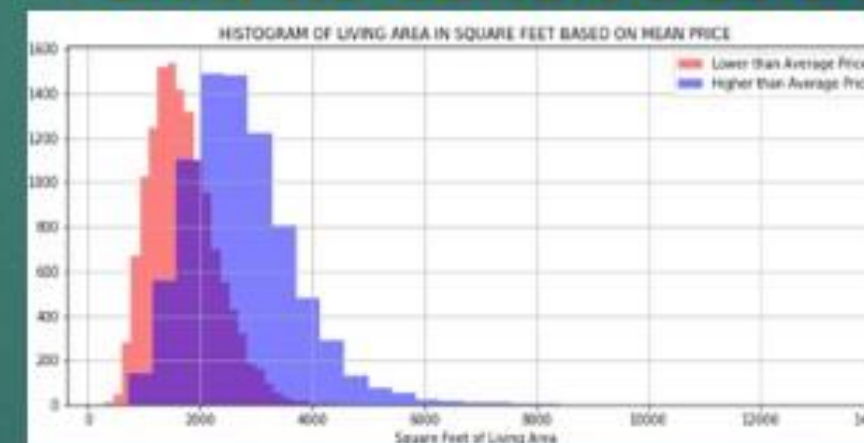
ARCHITECTURE OF THE ANN DESIGNED:



DATASETS USED FOR PREDICTIONS

1. House sale prices in King County, Washington, USA from May 2014 to May 2015
2. Google Stock Prices from 2012 to 2018
3. Temperature sensor data of an industrial machine, to predict and avoid sudden failure from 2013-2014

GRAPHS GENERATED DURING DATA PRE-PROCESSING STEPS :



GRAPHICAL RESULTS OF PREDICTED TRENDS :

