Literature Survey

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S.No	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
1	Flight delay prediction using supervised machine learning	In this work,the flight delay has been predicted by data collection mainly relies on the airport destination and their connecting routes ,using supervised machine learning algorithm for classification of flight delays.	• Decision tree • SPARK software • Statistical models	APPLIED DATA SCIENCE	**ADVANTAGES:** • The supervised machine learning algorithm for classification produces higher accuracy . • Can process about large amount of complex data compared to Ab initio tool. **DISADVANTAGES :** • Storage processing can be done for only about 2TB. • Requires more processing time And low accuracy rate.

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2	Flight delay prediction based on deep learning and Levenberg-Marquart algorithm	This study is about optimized forecasting model based on deep learning which engages LM algorithm. Where , two other structures are created to study and validate the positive effect of denoising autoencoder and LM algorithm	• Levenberg - Marquart algorithm. • Root Mean Square Error. • Linear Regression.	APPLIED DATA SCIENCE	**ADVANTAGES:** • accuracy of SDA-LM model with imbalanced dataset respectively is greater Than SAE-LM model • proposed model has greater accuracy in forecasting fight delay compared to previous model called RNN **DISADVANTAGES** • Dataset should be balanced instead of undersampling and upsampling

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3	Comparative Study of Flight Delay Prediction using Back Propagation and Radial Basis Function	The objective of the proposed system is to predict the delays of flights prediction will be done using Backpropagation network and Radial Basis function and in the end, the one with most accuracy will be considered as an efficient model and employed.	- Radial basis neural network. - Backpropagation Algorithm	APPLIED DATA SCIENCE	**ADVANTAGES:** - RBFs can be trained much faster than the perceptron. - The smallest training error was achieved with RBFN **DISADVANTAGES:** - The dataset used was not large enough

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4	Flight Delay Prediction Using a Hybrid Deep Learning Method	The goal of this study is to assess the viability and efficacy of the HDL model in comparison to a feed-forward ANN and gradient boosted tree machine learning (XGBoost).	• XGBoost • Hybrid deep learning.	APPLIED DATA SCIENCE	**ADVANTAGES:** • The model will likely outperform the XGBoost model If weather data included **DISADVANTAGES:** • The HDL model did not result in the highest accuracy compared to ANN model.

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5	Flight Delay Classification Prediction Based on Stacking Algorithm	Main aim of this study is to explore the stability of the Stacking algorithm. Stacking is a combination of different algorithms with different performances. The design of this experiment to verify how strong or weak learners affect the Stacking performance. experiment result shows that whether strong learners or weak learners are removed, the overall accuracy of the Stacking has no obvious difference.	● SMOTE algorithm ● k - fold ● Features Selection ● Boruta algorithm	APPLIED DATA SCIENCE	**ADVANTAGES :** ● Overall accuracy remained same when the algorithm stacking was implemented **DISADVANTAGES:** ● It does not add exact weather related features in the prediction model

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6	Flight Departure Time Prediction Based on Deep Learning	This model works by predicting the departure time of a single flight, this paper proposes a GRU neural network prediction model under the influence of multiple factors. The experimental results based on the test set show that the selected influencing factors are closely related to the flight operation.	• A gated recurrent unit (GRU) model • Deep LSTM neural network	APPLIED DATA SCIENCE	**ADVANTAGES :** • static research data are easy to obtain and the modeling is simple. **DISADVANTAGES:** • If the historical data cannot be updated, it is difficult to present the flight operation law

THANK YOU