



NARASARAOPET ENGINEERING COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
2024 - 2025

Batch Number	BB5
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Guide	Shaik Khaja Mohiddin Basha
Title	Predictive Insights for Flight Ticket Pricing: Comparative Analysis of XGBRegressor, RandomForestRegressor, and ExtraTreesRegressor Models
Domain/Technology	MACHIN LEARNING
Base Paper Link	https://ieeexplore.ieee.org/document/8721644
Dataset Link	https://www.kaggle.com/nikhilmittal/flightfareprediction-mh
Software Requirements	Browser: Any latest browser like Chrome Operating System: Windows 11 Server later Python
Hardware Requirements	SystemType: Intel Core i5 or above RAM: 8 GB Number of cores:5 , Number of Threads: 4
Abstract	<p>The paper is proposing a Novel XGBRegressor Optimizer to address the flight ticket price prediction shortcomings by comparing ExtraTreesRegressor with it. Still, the usefulness of both models lies in enhancing the system performance as regards ticket price prediction. This Novel XGBRegressor Optimizer is another class that optimizes model parameters of the XGBRegressor by using gradient boosting. However, ExtraTreesRegressor is a great extension of random forests in the reduction of over-prediction variation using extremely random trees. In total, 40 sample sets have been used in this study in order to examine the under-study models. Using the ClinCalc software, this setup was checked for correctness, performing supervised learning2 with = 0.05, g-power = 0.8, taking 95% as the confidence internal Ci. Because of the experiment and assessment of the risk for over-learning, Novel XGBRegressor Optimizer was able to reveal performance of 82.7%, while ExtraTreesRegressor achieved 78.2%. Individual scores used for independent samples test levels, which for this level had a significance value of p=0.000. The study does present the Novel XGBRegressor Optimizer as efficient in improving the prediction of flight travel ticket prices when compared with the ExtraTreesRegressor.</p>

Signature of the student(s)

Signature of the Guide

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