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## **Internship Project Submission Form**

1 message

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Tue, Oct 29, 2024 at 2:34 PM

Thanks for filling out Internship Project Submission Form

Here's what was received.

## Internship Project Submission Form

Project Submission Form. Project Teams need to submit only one submission per project.

Email \*

nvnaveenkannaceo@gmail.com

Project Team ID \*

PTID-CDS-SEP-24-2087

Project ID \*

PRCP-1025

Project Name \*

Flight Fare Prediction

Project Start Date (dd/mm/yy) \*

7/10/2024

Project End Date (dd/mm/yy) \*

21/10/2024

Project files (only ipython notebook file & related documents) \* Upload up to 5 files.

## Submitted files

- W Challenges Faced Report Naveen Kanna.N.docx
- W Model Comparison Report Naveen Kanna.N.docx
- PRCP-1025-FlightPricePrediction Naveen Kanna.N.ipynb

## Project Analysis \*

- 1. Objective: To develop a predictive model for airline ticket prices using a dataset of flight details.
- 2.Data Exploration:

Explored data types, distribution, and outliers to gain insights into feature relevance.

Identified key predictors including airline type, departure and arrival locations, duration, stops, and travel time.

3. Feature Engineering:

Processed categorical variables (airline, source, and destination) using encoding techniques.

Extracted date-related features from departure/arrival times for more detailed analysis.

4. Data Preprocessing:

Handled missing values and standardized numerical features.

Partitioned the dataset into training and testing sets.

5. Model Selection:

Implemented multiple models, including Linear Regression, Decision Trees, and Ensemble methods (Random Forest and Gradient Boosting).

Hyperparameter tuning applied for optimal performance.

6.Evaluation Metrics:

Models evaluated using MAE, MSE, and R<sup>2</sup> score to ensure accuracy and reliability.

7. Challenges:

Addressed challenges like data imbalance, multicollinearity, and high cardinality in categorical features.

Project Video  No files submitted	
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