**DS04 Activity 6: Test and Evaluate the Model**

After Activity 5 we performed the following tasks

Task 1: Run the experiment,

Task 2: When it has finished, visualize the output of the Evaluate Model module.

It shows that all in the pipeline are in good condition

A computer screen shot of a computer

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A screenshot of a computer

Description automatically generatedLet's preview the Visualization and the Matric after the Experiment,

**Take Note!** After Activity 6 will be continue for Activity 7 for Deploy and publish real time

**Coefficient of Determination (R-squared):**

R-squared measures how well the independent variables in a regression model explain the variation in the dependent variable.A value of 0.8900684 indicates that approximately 89% of the variance in the dependent variable (e.g., flight delay) can be predicted using the model. This suggests a strong relationship between the predictors and the target.

**Mean Absolute Error (MAE):**

MAE is an average of the absolute differences between predicted and actual values. An MAE of 8.620532 means, on average, the model's predictions differ from the actual values by approximately 8.62 units (e.g., minutes of delay).

**Relative Absolute Error (RAE):**

RAE is a relative measure that represents the proportion of the total absolute errors.An RAE of 0.4000613 implies that the model's absolute prediction errors are a fraction (about 40%) of the total absolute errors. Lower values are preferable.

**Relative Squared Error (RSE):**

RSE is a relative measure that represents the proportion of the total squared errors.An RSE of 0.1099316 indicates that the squared prediction errors are about 11% of the total squared errors, providing insight into the model's goodness of fit.A screenshot of a computer

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**Root Mean Squared Error (RMSE):**

RMSE is the square root of the average of squared prediction errors.An RMSE of 12.72408 means that, on average, the model's predictions differ from the actual values by approximately 12.72 units. Smaller RMSE values are preferred, indicating a closer fit of the model to the data.

In summary, these metrics collectively help assess the performance of a regression model in predicting flight delays. A high R-squared suggests a strong relationship, while low MAE, RAE, RSE, and RMSE values indicate that the model's predictions are close to the actual values, which is desirable for accurate predictions.