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## Challenge

Your challenge is to create a machine learning web service that predicts flight delays that are accurate to within 10 minutes when tested with the test data set that is provided with this course.

Start by creating a new Azure Machine Learning experiment, and giving it a suitable name (such as "Flight Predictions"). Then add the **Flight Delay Data** sample dataset to the experiment, and visualize its contents. This dataset consists of the following fields:

- **Year:** The year in which the flight took place.
- **Month:** The month in which the flight took place.
- **DayofMonth:** The day of the month on which the flight took place.
- **DayOfWeek:** The week day on which the flight took place.
- **Carrier:** The airline operating the flight.
- **OriginAirportID:** A numeric code indicating the departure airport.
- **DestAirportID:** A numeric code indicating the destination airport.
- **CRSDepTime:** The scheduled departure time in 24-hour format.
- **DepDelay:** The number of minutes late or early that the flight departed.
- **DepDel15:** A Boolean column indicating whether or not the flight departed 15 minutes or more late.
- **CRSArrTime:** The scheduled arrival time.
- **ArrDelay:** The number of minutes late or early that the flight arrived.

- **ArrDel15:** Whether or not the flight arrived 15 or minutes more late.
- **Cancelled:** Whether or not the flight was cancelled.

You must use the techniques you have learned in this course to explore the dataset, and perform the necessary feature selection and engineering, model evaluation, and tuning to create a machine learning model that predicts the **ArrDelay** column.

After you have created a model, you must publish it as a web service and test it using the **Test-Flights.csv** test dataset provided. This dataset contains 25 observations in which the **ArrDelay**, **ArrDel15**, and **Cancelled** columns have been set to 0. You will score a point for each observation for which your model successfully predicts the **ArrDelay** label to within 10 minutes of the actual delay time.

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