Fact Discovery and Prediction of Flight Delays

The U.S. Department of Transportation's (DOT) Bureau of Transportation Statistics tracks the on-time performance of domestic flights operated by large air carriers.

We have used the dataset of **January 2019** flight delays and cancellations.

We are trying to predict the **Delay in departure. (DEPARTURE_DELAY)**

We used the following features for **ranking the airline and for prediction.**

Most useful Features used in project-

YEAR	Year of flight
MONTH	Month of flight
DAY_OF_WEEK	1 – SUN , 7 – SAT
ORIGIN_AIRPORT	Three letter origin airport ID
DEPARTURE_TIME	Time of departure of flight **We found this has the highest impact on delay in departure.**
DEPARTURE_DELAY	Delay in departure. (Dependent variable)
ARRIVAL DELAY	Delay in Arrival of a flight **(AVOIDED FEATURE TO AVOID DATA LEAKAE)**
WHEELS_OFF	The time point that the aircraft's wheels leave the ground
WHEELS_ON	The time point that the aircraft's wheels touch on the ground
TAXI_OUT Time	The time duration elapsed between departure from the origin airport gate and wheels off.
FLIGHT_SPEED	Speed of flight

There were many other features which we didn’t use since most of them had lot of NaN values.