Summary Report

**INTRODUCTION:**

In the airline industry, customer satisfaction plays a huge role in determining the credibility of the airline. Many measures have been taken to improve customer satisfaction. Loyalty programs, frequent flier miles are a few examples of them. Recently a new idea has been launched. This is the premium economy seat. Traditionally, the economy class used a 3-4-3 seating arrangement in the international flights. Distance between 2 seats used to be less and armrests were not comfortable. This did not improve customer satisfaction especially in long journey flights(non stop flights would be even worse). The premium economy class was introduced to ensure that passengers travelling in economy were comfortable while still keeping a clear difference between economy and first class.

In our case study, we look to determine the cause behind the pricing of premium economy tickets between various flights(British Airways, Delta, Jet, Singapore Airlines, Virgin and Air France).

**METHODOLOGY**

To perform this analysis, a dataset was created consisting of related data from each of the six airlines. Each of the variables were analysed and compared(Pitch, Width, No: of seats in premium economy, transit time, etc). These variables were tested and plots and graphs were prepared. After rigorous testing(t-test and linear regression), it was found that the price of Premium economy tickets depended on the following factors

* Duration of the flight
* Airline
* Relative pricing between economy and premium economy
* Pitch difference
* Percentage of premium seats
* Price of economy seats

A linear regression model was designed with these predictors to predict the price of Premium economy tickets. The linear model had an accuracy of 0.9529(0- no fit, 1- perfect fit) using multiple R squared method and 0.9518 using the adjusted R squared method.