**Report on Airline Pricing Project**

**By**

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*This report had made from analyzing the SixAirlines.csv file.*

1. *Average no. of seats in economy is greater than average no. of seats in premium.*
2. *Average price of seats in economy is lesser than average price of seats in premium.*
3. *Hypothesis Tests*
   * 1. *Total no. of seats in Boing aircraft is less than Airbus aircraft.*

* *Since p-value < 0.05 suggests no significant difference between the means of our sample populations and we would reject our null hypothesis. From their means, it is found that total no. of seats in Boing aircraft is same as Airbus aircraft.*
  + 1. *Total no.of economy seats in Boing aircraft is lessthan Airbus aircraft*
* *Since p-value < 0.05 suggests no significant difference between the means of our sample populations and we would reject our null hypothesis. From their means, it is found that total economy no. of economy seats in Boing aircraft is same as Airbus aircraft.*
  + 1. *Total no.of Premium seats in Boing aircraft is lessthan Airbus aircraft*
* *Since p-value < 0.05 suggests no significant difference between the means of our sample populations and we would reject our null hypothesis. From their means, it is found that total economy no. of premium seats in Boing aircraft is same as Airbus aircraft.*
  + 1. *COST of Premium seats in Boing aircraft is less than Airbus aircraft.*
* *Since p-value > 0.05 suggests no significant difference between the means of our sample populations and we would not reject our null hypothesis. From it’s mean values it is found that COST of Premium seats in Boing aircraft is less than Airbus aircraft*
  + 1. *COST of ECONOMY seats in Boing aircraft is less than Airbus aircraft*
* *Since p-value > 0.05 suggests no significant difference between the means of our sample populations and we would not reject our null hypothesis. From it’s mean values it is found that COST of Premium seats in Boing aircraft is less than Airbus aircraft*

1. *Regression Models*

### *Regression model to estimate the price of economy seat(Y) from predictors FLIGHT\_DURATION(X1), SEATS\_ECONOMY(X2), PITCH\_ECONOMY(X3), WIDTH\_ECONOMY(X4), QUALITY(X5), MONTH(X6), AIRCRAFT(X7) and AIRLINE(X8) Y=B0+B1\*X1+B2\*X2+B3\*X3+B4\*X4+B5\*X5+B6\*X6+B7\*X7+B8\*X8 where Bi is beta constants.*

1. *Regression model to estimate the price of PREMIUM seat(Y) from predictors FLIGHT\_DURATION(X1), SEATS\_PREMIUM(X2), PITCH\_PREMIUM(X3), WIDTH\_PREMIUM(X4), QUALITY(X5), MONTH(X6), AIRCRAFT(X7) and AIRLINE(X8)*

*Y=B0+B1\*X1+B2\*X2+B3\*X3+B4\*X4+B5\*X5+B6\*X6+B7\*X7+B8\*X8 where Bi is beta constants*

1. *This regression model(1&2) helps to estimate the price of seat(premium or economy) in any month, of any width, of any pitch, of any aircraft, of any airline, of any quality. In this regression model by making AIRCRAFT value constant to 0 or 1, It helps to test the hypothesis 4 and hypothesis 5.*

*It means Y=B0+B1\*X1+B2\*X2+B3\*X3+B4\*X4+B5\*X5+B6\*X6+B7\*(IT'S VALUE EITHER 0 OR 1)+B8\*X8*