**Project Summary**

Week 4 Day2

Q. ***What factors explain the difference in price between an economy ticket and a premium-economy airline ticket?***

The factors are :

1. SEATS\_PREMIUM are less than that of SEATS\_ECONOMY
2. PITCH\_PREMIUM is less than that of PITCH\_ECONOMY
3. WIDTH\_PREMIUM is more than WIDTH\_ECONOMY
4. PRICE\_PREMIUM is more than that of PRICE\_ECONOMY

**All the related box plot and corrgram are added in the folder**

Please check all the output and plots. I have run regression comparing SEAT\_PREMIUM vs all other relevant factors and SEAT\_ECONOMY with all other relevant factors. I have based my hypothesis on the same basis comparing difference of economy and premium things at a Airline.

I came across this pattern :

>fitPremium <- lm(Price\_pre~Airline+Seats\_pre+Pitch\_pre+Width\_pre+Price\_rel)

> coef(fitPremium)

(Intercept) Airline Seats\_pre Pitch\_pre Width\_pre Price\_rel

4800.74020 -758.66262 21.18664 -798.95058 1474.58400 360.71504

> fitEconomy <- lm(Price\_eco~Airline+Seats\_eco+Pitch\_eco+Width\_eco+Price\_rel)

> coef(fitEconomy)

(Intercept) Airline Seats\_eco Pitch\_eco Width\_eco Price\_rel

-10997.024652 -153.260771 1.196935 393.844468 18.626343 -176.303186

It just goes to prove that PRICE\_PREMIUM increases with SEATS\_PREMIUM, PITCH\_PREMIUM, WIDTH\_PREMIUM and PRICE\_RELATIVE.

On the other hand, it decreases at a much faster rate than PRICE\_ECONOMY when it comes to different types of Airlines

PRICE\_ECONOMY increases with SEATS\_ECONOMY, PITCH\_ECONOMY and WIDTH\_ECONOMY.

It decreases with different types of Airlines and PRICE\_RELATIVE.

These factor affect heavily to explain the difference in price between an economy ticket and a premium-economy airline ticket.

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