

### **Chi-Sq Test - Significance of Time of Delivery in Food online delivery business:**

The Chi Square statistic is commonly used for testing relationships between categorical variables. For eg: If in a food delivery firm, the analyst wants to know if the Time of delivery (Morning/afternoon/evening/night) has any significance or reason to cause the late delivery (which is the target variable 0/1). While both are being a categorical variable we can understand the relationship by using a chi sq test.

The Null hypothesis is that there are no significant relationship and both are independent, alternate is to prove otherwise that there should be some relationship. If P value is less than significance level (i.e. 5% commonly) we will accept that there is a relationship between two variables and keep the independent variable for our further analysis.

If the P value is larger ( $>0.05$ ) we can accept the null and remove the variable from the dataset for further analysis or model building.