**=> This data is user reviews of the Grab app.**

**=> Data**

**1) index is the row number.**

**2) review\_text is a user review.**

**3) review\_rating is the user's evaluation of the application. (from 1 to 5)**

**4) author\_id is the user's ID.**

**5) author\_name is the user's name.**

**6) author\_app\_version is the Version the Review Was Made.**

**7) review\_datetime\_utc is a Review Datetime in UTC.**

**8) review\_likes is the Number Of Likes Of The Review.**

**=> Questions**

**1) total number of reviews and likes.**

**2) total number of Promoter reviews and likes.**

**3) total number of Passive reviews and likes.**

**4) total number of Detractor reviews and likes.**

**5) Do we keep our customers?**

**6) Are we seeking to develop the application?**

**=> Data Preparing**

**1) Remove a review text and author\_name columns**

**2) Replace review\_datetime\_utc column by Review\_Date and Review\_Time   
 Columns.**

**3) Remove author\_id and Review\_Time Columns.**

**4) there are null values in author\_app\_version but we can predict version by   
 know the review date and The version was taken from the review date that   
 was before or after it.**

**5) Divide the reviews into three categories:**

**a) Promoter => user is satisfied if his review is 4 or 5.**

**b) Passive => user is satisfied but not completely satisfied if his review is 3.**

**c) Detractor => user is not satisfied if his review is 1 or 2.**

**=> Insights  
 1) We have shown several KPIs that measure the actual performance of the   
 application such as Reviews , Likes, Promoter reviews, Likes on promoter   
 reviews, Passive reviews, Likes on passive reviews , Detractor reviews, Likes   
 on Detractor reviews**

**2) It seems that we have been losing users since 2019, as the number of   
 reviews and likes has decreased year after year.**

**3) It seems that we are not improving the application, but rather each version   
 is getting worse than the one before it since 2019, as the percentage of   
 Detractor reviews and likes on them increases year after year, and the   
 percentage of Promoter reviews and likes on them decreases.**