**Objective:**   
To analyze the data of Associates of Company XYZ related and interpret the root cause of Attrition problem in Organization and summarize appropriate Corrective Actions and the Mitigation plan to solve the problem.

**Analysis:**

* Exploratory Data Analysis is performed on Data to understand the distribution of critical variable and initial observations are recorded.
* Correlation between the variables (continuous) with Attrition is checked and shortlisted the driving factors.
* Hypothesis testing is then, performed on the variables to check the correctness of the expected/suspected affecting variables.  
  Note book Link: <https://github.com/karthik-chilumoju/LetsUpgrade-AI-ML/tree/master/Day7>

**Results:**

* There are many outliers observed in Monthly Income and Years at Company, but Age of associates is evenly distributed.
* Correlation Hypothesis testing results shows that there is significant correlation between Age, Income, Total Working years, Year at company, Training times last year, Years since last promotion, Years with current manager, Number of companies worked.   
  and there is no Correlation with Gender and Distance from Home.
* Through, Hypothesis testing it is observed that there is no significant difference in Annual Incomes in Associates with and without Attrition. However, there is significant dependency between gender and Attrition.
* Using parametric test, it is observed that there is significant difference in Distance from Home in Associates with and without Attrition.

**Corrective Actions:**

* As, Gender is related to Attrition, imbalances between Gender should be maintained by counselling the women and men associates. Women empowerment and Strength should be taken care by providing separate quota and benefits.
* Personal Development trainings shall be provided to Women to cope up with challenging environments and to Men about importance gender equality.
* Distance from Home is another factor affecting Attrition. Hence, Transportation shall be provided to all locations in City to reduce the efforts of Associate reaching office safely.