**Problem Solving and Critical Thinking Assignment**

*To predict the likelihood of a candidate joining the company, if likelihood is high company can go ahead and offer the jobs to candidates.*

ScaleneWorks supports several information technology (IT) companies in India with their talent acquisition. One of the challenges they face is about 30% of the candidates who accept the jobs offer do not join the company. This leads to huge loss of revenue and time as the companies initiate the recruitment process again to fill the workforce demand. ScaleneWorks wants to find if a model can be built to predict the likelihood of a candidate joining the company.

Data Dictionary:

SLNO: Sl number auto increment

Candidate Ref: Candidate reference number

DOJ Extended: Date of Joining of extended

Duration to accept offer: Duration to accept the offer by candidate

Notice period: Notice period of previous employer

Offered band: E1 < E2 < E3 and so on

Percent hike expected in CTC: expected hike by candidate

Percent hike offered in CTC: hike offered by joining organisation

Percent difference CTC: difference between expected and offered

Joining Bonus: any joining bonus offered.

Candidate relocates actual: relocating required or not

Gender: Gender of candidate

Candidate Source: How candidate applied or reached

Rex in Yrs: years of exp

LOB: Line of business

Location: current location

Age: Age of candidate

Status: joined or not.

1. Identify and define the problem statement clearly also mention why it is necessary for an organisation to solve the problem.
2. Define any hypothesis if possible.
3. Do the EDA of dataset and explain every step and the observation you got form the dataset?
4. Develop a machine learning algorithm.