***Group 10.***

***Project Members:***

*1. P. Rithwik Sai - 20057*

*2. K. Likhith Reddy - 20039*

*3. K. Hari Chandan - 20034*

***PROJECT ABSTRACT: Employee-Attrition-Prediction***

***Informal description:***

*As the Coronavirus continues to release its devastation, the world keeps on getting driven into the emergency of the extraordinary financial downturn, an ever-increasing number of organizations begin to chop down their failing to meet expectations workers. An organization terminating hundreds and thousands of Representatives is a normal title today. Chopping down representatives or decreasing a worker pay is a difficult choice to take.*

*Predicting the best way to cut cost without compromising the outcome. Providing Insights by considering all the stats of employees which helps the company to cut cost effectively.*

***Formal description:***

*So, from the data sets and the stats of the employees working we can visualize and interpret the pattern, which helps the company/organization to cut cost effectively without compromising the company/organization’s revenue or outcome.*

*The Plots will Helps us to Filter the data sets on multiple Attributes and train the program to create a new data set with the employee status.*

***Assumption:***

*Sometimes to reduce cost company removes employees but that will not solve the problem every time because without following the patterns or getting incorrect insights may push the company into further problems.*

***Introduction:***

***Motivation: -***

*Does removing representatives truly address the emergency the organization is having? Why does some companies fall into much more bigger problems after cutting off?*

***Benefits of the solution:***

*Consider the program is a success, it would directly boost the company overall performance. It doesn’t only help the companies’ performance but also helps the employees who are worth and deserved.*

***Requirements:***

*Datasets on employee details specifying the employee’s work performance, work capability , no of years worked etc…..*

*Plotting’s using matplotlib, seaborn , plotly etc…… to find the patterns of the employee capabilities.*

*Machine learning algorithms to find the probability of employee’s chance to stay at the profession.*

*Front-end webpage to represent the plotting, datagrams , probability of the employee to stay at the profession.*

***Dataset finalization:***

*The Datasets which we primarily going to use are:*

***Train.csv***

***Test.csv***

***Outcome.csv***

***Source:*** ***https://www.kaggle.com/competitions/summeranalytics2020/data***

1. *These Train and Test Datasets contains the details and stats of employee with Data fields following as:*
2. *ID - an anonymous id given to an Employee*

*Age - Age of an Employee*

*Attrition - Did the Employee leave the company, 0-No, 1-Yes*

*Business Travel - Travelling frequency of an Employee*

*Department - Work Department*

*DistanceFromHome - Distance of office from home*

*Education Field - Field of Education*

*Employee Number - Number of Employees in the division of a given Employee.*

*Environment Satisfaction - Work Environment Satisfaction*

*Gender - Gender of Employee*

*Marital Status - Marital Status of an employee*

*Monthly Income - Monthly Income of Employee in USD*

*NumCompaniesWorked - Number of Companies in which Employee has worked before joining This Company*

*Overtime - Does the person work overtime*

*PercentSalaryHike - Average annual salary hike in percentages*

*StockOptionLevel - Company stocks given to an Employee.*

*Total Working Years - Total working experience of an employee*

*TrainingTimesLastYear - No. of trainings an employee went through last year.*

*YearsAtCompany - Number of years worked at this company.*

*YearsInCurrentRole - Number of years in current role*

*YearsSinceLastPromotion - Number of years since last promotion*

*YearsWithCurrManager - Number of years with the current manager*

*End*