PROJECT TITLE: PREDICTING LIFE EXPECTANCY USING MACHINE LEARNING

PROJECT ID: SPS_PRO_215 ***PROJECT TEAM: SOMYA DAS(INDIVIDUAL)***

PROJECT SCOPE DOCUMENT

1.PROBLEM DESCRIPTION:

A typical **Regression Machine Learning** project leverages historical data to predict insights into the future. This problem statement is aimed at predicting Life Expectancy rate of a country given various features.

Life expectancy is a statistical measure of the average time a human being is expected to live, Life expectancy depends on various factors: Regional variations, Economic Circumstances, Sex Differences, Mental Illnesses, Physical Illnesses, Education, Year of their birth and other demographic factors. This problem statement provides a way to predict average life expectancy of people living in a country when various factors such as year, GDP, education, alcohol intake of people in the country, expenditure on healthcare system and some specific disease related deaths that happened in the country are given.

2.PROJECT SUMMARY:

The project tries to create a model based on data provided by the World Health Organization (WHO) to evaluate the life expectancy for different countries in years. The data offers a timeframe from 2000 to 2015. The data originates from here: https://www.kaggle.com/kumarajarshi/life-expectancy-who/data The output algorithms have been used to test if they can maintain their accuracy in predicting the life expectancy for data they haven't been trained.

3.PROJECT REQUIREMENTS:

- Create IBM Account.
- Create the appropriate Cloud and Node-RED services.
- Download the dataset of WHO.
- Analyze it and clean the dataset.
- Train the regression model on different algorithms.
- Identify the best algorithm and finalize it to train our model.
- Build Node-RED flow for GUI.
- Create scoring end point for integrating our model to Node-RED.

4.FUNCTIONAL REQUIREMENTS:

- Provide input fields to the model.
- The model will return the average predicted life expectancy.

5.TECHNICAL REQUIREMENTS:

- The GUI must be integrated with the backend trained model.
- The clean data set must be given to model before training.

6.SOFTWARE REQUIREMENTS:

- IBM Cloud Account.
- IBM Watson Studio.
- Node-RED Application.
- Watson Machine Learning.
- Microsoft Excel.
- Python IDE.

7.PROJECT DELIVERABLES:

- Project Scope Documentation.
- Creating IBM Cloud account.
- Building ML model in IBM Watson Studio.
- Build Node-RED flow to integrate ML Services/Build Node-RED flow to integrate AutoAI.

8.PROJECT TEAM:

Somya Das(Individual).