# Project Name:Predicting Life Expectancy using Machine Learning

**ProjectScopeDocument**

**1.Project Summary**

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 such as: 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**.**ProjectRequirements**

The requriments that are needed to deploy the project are:

**1.** The data-set related to life expectancy, health factors for 193 countries have been collected from the WHO data repository website and its corresponding economic data was collected from the United Nations website. Among all categories of health-related factors, only those critical factors were chosen which are more representative

2.IBM cloud account

3.Github account

4.A node-red flow application to integrate with the model

**3.Functional Requirements**

The functional requirements that are needed to deploy the project are:

1.A supervised machine learning model based on regression written in python to

process the dataset for required output.

2.An IBM cloud services

3.An IBM watson studio to run AutoAI experiment and integrate it.

4.A node red flow application to build and integrate with AutoAI

**4.Technical Requirements**

The technical requirements that are needed are:

1.Knowledge of python

2.IBM cloud

3.Watson Studio

4. Node-red flow

**5.Software Requirements**

The software requirements that are needed to deploy the project are:

Github account, IBM cloud account, Watson studio service, Machine learning service,

Node-Red flow application

**6.Project Deliverables**

The project model will predict the life expectancy of various countries.It takes the input based on various factors and predict the value.

**7.Project Team**

It is an individual project developed by Pattela Dhanush.

**8.Project Schedule**

**Tasks Duration**

1.Setup the development environment 1 Days

2.Create IBM cloud Account 0.5 Days

3.Create Node red starter application 1 Days

4.Explore IBM watson use cases 0.5 Days

5.Explore IBM watson Machine Learning 3 Days

6.Build an ML model in IBM watson studio 2 Days

7.Automate the ML model 1 Days

8.Collect the dataset for the project 0.5 Days

9.Create the IBM cloud service 1 Days

10.Create a watson studio project 1 Days

11.Configure watson studio and create machine learning service 1 Days

12.Create a jupyter notebook in IBM watson and Import data 0.5 Days

13.Build a Machine learning model and create endpoints for 2 Days

node red integration

14.Build node red flow to Integrate ML service 2 Days

15.Create AutoAI experiment 1 Days

16.Build node red flow to Integrate AutoAI 1 Days