

# Project Scope Document

## **Project Summary:**

Life expectancy is a statistical measure of the average me 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.

## **Project Requirements:**

This project can be used by hospitals and the doctors to predict the life expectancy of a patient with the underlying disease or a new-born baby. It can be used by government to predict the life expectancy of the economic backward people due to poverty. With the help of this project it will be easy for governments of the countries with less life expectancies to improve their medical and healthcare services.

This Project Requires

Good Knowledge Of Machine Learning Algorithms Like Regression, Decision Tree.

Knowledge of Various Libraries Like Scikit Learn, Numpy , Seaborn , scipy. Knowledge about Watson Studio and Node-Red.

## **Functional Requirements:**

IBM Watson Studio and Jupyter Notebook will be used to write the code.

Various Machine Learning Libraries like Scikit Learn, Numpy, Scipy, SeaBorn will be used to train, test and plot the data.

Various algorithms such as Regression, Decision Trees, Random Forests will be used to view the accuracy and predict the result.

Node Red- Applica on in IBM Studio will be used to show the flow of project.

## **Technical Requirements:**

Technical Requirements Includes Various Steps -

Step 1: Loading packages

Step 2: Reading the Data

Step 3: Perform Exploratory Data Analysis

Step 4: Perform Pre-processing of The Data.

Step 5: Apply Various Algorithms and Predict the output.

### **Software Requirements:**

Windows 7 and Above

IBM Watson Studio

IBM Cloud

GitHub

Slack

Python

Jupyter Lab

Various Services on IBM Watson Studio

### **Project Deliverables:**

Best Parameters for Predict on Data

R Square on the test data with good predict on percentage.

Mean Absolute Error and Root Mean Squared Data (MAE and MSE) on data.

Predict on od Fata Using Various Regression and Classification on Techniques.

### **Project Team : Prem Patel**

<https://github.com/SmartPracticeschool/IISPS-INT-1993-Predicting-Life-Expectancy-using-Machine-Learning>