

# **PROJECT SCOPE DOCUMENT**

## **PREDICTING LIFE EXPECTANCY USING MACHINE LEARNING**

### **PROJECT SUMMARY:**

The idea is to develop a Web Application that will predict 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 Illness, Physical Illness, Education, Year of their birth and other demographic factors. This problem statement provides a way to predict the 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.

### **PROJECT REQUIREMENTS:**

- The web-app must take inputs/factors influencing the life expectancy and predict the average life expectancy of people in the country.

### **FUNCTIONAL REQUIREMENTS:**

- Prediction of a Number signifying the Average Life Expectancy of a country depending on factors: Year, Status, Adult Mortality, Infant Deaths, Alcohol, Percentage Expenditure, Hepatitis B, Measles, BMI, Under-five deaths, Polio, Total Expenditure, Diphtheria, HIV/AIDS, GDP, Population, Thinness 1-19 years, Thinness 5-9 years, Income Composition of Resources, Schooling.

### **TECHNICAL REQUIREMENTS:**

- Output to be predicted within fractions of second.
- Output given by the model must be valid.
- The web-app must be available and efficient.

## SOFTWARE REQUIREMENTS:

- Python
- IBM Cloud
- IBM Watson
- Node-RED

## PROJECT DELIVERABLES:

- Creation of IBM, Github and Slack Accounts
- Activation of IBM Watson
- Collection of Life Expectancy Data set
- Build a Machine Learning Linear Regression Model/Use Auto-AI for its creation
- Integrate the model with Node-RED

## PROJECT TEAM:

- Shalaka Thorat

## PROJECT SCHEDULE:

TASK NAME	SCHEDULED DATE
Explore IBM Cloud Platform	25-26 May 2020
Explore IBM Watson Services	26-29 May 2020
Introduction to Watson Studio	30 May-1 June 2020
Predicting Life Expectancy with Python	2-9 June 2020
Predicting Life Expectancy without Python	10-15 June 2020
Submission of Project Codes	16 June 2020

Note: Predicting Life Expectancy with/without Python to be performed but both will be tried for implementation if possible.