**Predicting Life Expectancy using Machine Learning**

**Project Summary**

The aim of the project is to predict life expectancy rate of a country given various features 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. Considering an eclectic combination of all the features I will be able to predict the life expectancy using Machine Learning.

**Project Requirements**

Create a Machine Learning model which can predict the life expectancy rate of a country with the help of various input features. We can also figure out which feature/features play an important role in determining the life expectancy rate.

**Functional Requirements**

We will create a watson studio project and complete the data preprocessing and build the machine learning algorithm and deploy the model. We will create one model using python and another without using python. In the latter we will take the help of Auto AI. After successful implementation of the model we will be able to predict the life expectancy based on the given input features. So, the average life expectancy will be our output.

**Technical Requirements**

Python

Machine Learning

Working with IBM cloud services

**Software Requirements**

IBM Cloud

IBM Watson Studio

IBM Auto AI

**Project Deliverables**

A Machine Learning model to predict the Life Expectancy rate of a country given various features.

**Project Team**

Prerak Shah

Smartbridge mentors

**Project Schedule**

### Project Planning & Kickoff

Project Scope, Schedule, Team & Deliverables (1 Day)

Setup the development environment (1 Day)

### Explore IBM Cloud Platform

Create IBM Cloud account (0.5 Day)

Create a NODE-RED starter application (1 Day)

### Explore IBM Watson Services

Explore IBM Watson Usecases (1 Day)

### Explore IBM Watson Machine Learning (3 Days)

### Introduction To Watson Studio

### Build Your Own ML Model In IBM Watson Studio (2 Days)

### Automate Your ML Model (1 Day)

### Predicting Life Expectancy With Python

### Collect The Dataset For The Project (0.5 Days)

Create Necessary IBM Cloud Services (1 Day)

### Create A Watson Studio Project (1 Day)

Configure Watson Studio (1 Day)

### Create Machine Learning Service (0.5 Day)

### Create A Jupyter Notebook In IBM Watson And Import Data (0.5 Day)

### Build A Machine Learning Model And Create Endpoints For Node-RED Integration (2 Days)

Build Node-RED Flow To Integrate ML Services (2 Days)

### Predicting Life Expectancy Without Python

### Collect The Dataset For The Project (0.5 Days)

Create Necessary IBM Cloud Services (0.5 Day)

### Create A Watson Studio Project (1 Day)

Configure Watson Studio (1 Day)

### Create Machine Learning Service (0.5 Day)

Import Dataset And Create AUTO AI Experiment (1 Day)

Build Node-RED Flow To Integrate AutoAI (1 Day)