**Project Documentation**

**Project Title: Predicting Life Expectancy using Machine Learning.**

**Project Description:** Life expectancy is a statistical measure of the average time a human being is expected to live.This project's aim is to predict the average life expectancy of a human being of a country which depends on various factors like Regional variations, Economic Circumstances, Sex Differences, Mental Illnesses, Physical Illnesses, Education, Year of their birth and other demographic factors.

In this project an UI is provided that is built using Node-Red application of IBM cloud in which the user will provide some values like year, adult mortality, alcohol, total expenditure, BMI, info regarding some diseases, thinness, schooling, etc and the user will get the predicted life expectancy as output.

The project uses a **Random Forest Regressor Machine Learning** model to predict the life expectancy which is deployed on IBM cloud using services like IBM Watson Studio and IBM Watson Machine Learning Service.

I have also prepared a model using IBM AutoAI experiment which allows us to create a machine learning model without any knowledge of coding. I have deployed that model as well and integrated with a Node-Red UI also.

The dataset used or the training of the model was downloaded from kaggle.com and Python is used to write the code for machine learning model.

**Technical tools/methods/skills:** The technical requirements of this project are:

* Datasets
* Knowledge of python
* Machine Learning
* Models
* Algorithms
* Libraries

**Softwares/services used:** The software requirements of this project are:

* IBM cloud services
* IBM Watson services
* IBM Watson Studio
* IBM AutoAI experiment
* IBM Node-Red application
* SmartInternz Project Workspace
* Jupyter Notebook
* Github
* Slack
* Zoho document writer

**Project Team:** The project team consists of only one member:

* Sharath K.P. (Project leader)

**Link to access the web-application:**

<https://node-red-zmrye.eu-gb.mybluemix.net/ui/>

**Link to the source code:**

<https://github.com/SmartPracticeschool/llSPS-INT-1696-Predicting-Life-Expectancy-using-Machine-Learning>