Predicting Life Expectancy Using Machine Learning

Project Scope

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: 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.

Also, some of the past research was done considering multiple linear regression based on data set of **one year** for all the countries.But this dataset provided by data from WHO(https://www.kaggle.com/kumarajarshi/life-expectancy-who)considers a timeframe from 2000-2015 for 193 countries.

Project Requirements

Functional Requirements:

1. Predicting the life expectancy rate of a country by considering the impact of GDP, education, alcohol intake, expenditure on healthcare etc.

Technical Requirements:

1. Python
2. IBM Cloud
3. IBM Watson Studio
4. Node-RED

Hardware Requirements:

1. Processor: i3 7th gen or higher
2. Speed: 2 GHz or more

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Project Deliverables

1. Given a form where several inputs are entered by the user (GDP, Status,education, mortality etc) ; the system predicts the life expectancy of the country.
2. The system aims to determine how the various factors impact life expectancy of a country and find which factors are prominent influencors.

Project Team

1. Vedita Vinod Kamat (Individual)

Project Schedule

Task	Days
1. Git 2. Zoho Writer 3. IBM Cloud Services 4. Watson Studio 5. Node-RED	0.5 day (20/05/2020) 0.5 day (20/05/2020) 1 day (21/05/2020) 3 days (22/05/2020) 2 days (25/05/2020)
1. Documentation 2. Data Preprocessing 3. ML Algorithms 4. Node-RED Integration	1 day (27/05/2020) 2 days (29/05/2020) 3 days (2/06/2020) 1 day (06/06/2020)

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