

PREDICTING LIFE EXPECTANCY USING MACHINE LEARNING

PROJECT MANAGER: Shreya Saxena

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PROBLEM STATEMENT:-

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.

PROJECT SUMMARY:

The aim of this project is to predict life expectancy of people in a country. The model predicts according to several factors related to the person and the country they reside. Some factors are: illness, age, alcohol intake, financial status of the person also the healthcare system and facilities provided by the country, immunization related factors, economical factors, history of disease in the country and many other factors.

PROJECT REQUIREMENTS: An appropriate dataset is needed to build the model.

FUNCTIONAL REQUIREMENTS: The project flow will be as follows:

- 1.Preprocessing of the dataset- Cleaning of the dataset, Eliminating noise
- 2.Exploratory Data Analysis
- 3.Splitting the dataset into training data and testing data
- 4.Training the model using machine learning algorithms
- 5.Prediction of the model by user-input
- 6.Checking accuracy, R2 score, RMSE of the model
- 7.Optimizing if needed
- 8.Deploying the model
- 9.Creating UI using Node-Red

TECHNICAL REQUIREMENTS: Computer/Laptop, Minimum 2.2GHz Processor, Any Operating System.

SOFTWARE REQUIREMENTS: IBM Watson, IBM Machine Learning Services, Github, Python v3, IBM Notebook / Jupyter Notebook.

PROJECT DELIVERABLES:

The project is about predicting the life expectancy of people in a country using health, social, and economic variables. The country can improve factors like healthcare system, immunizations, etc to increase the life expectancy of people living in the country from the predictions made by the model. User has to enter various fields like the adult mortality, GDP, diseases, etc of the country he resides in and can find his life expectancy.

PROJECT TEAM: Individual project.

PROJECT SCHEDULE: The project is to be completed in 1 month and work for atleast 5 days a week. The project can be divided into two phases, one to build the model and the other for UI.