Child Mortality prediction using Machine Learning Techniques

ABSTRACT

Children's Mortality alludes to mortality of children younger than 5. The kid death rate, in addition under-five death rate, alludes to the probability of biting the mud among birth and exactly 5 years recent. The mortality of kids in addition happens in embryo. The purpose is to analysis AI based mostly strategies for grouping of mortality vertebrate upbeat characterization brings concerning best truth. The examination of dataset by directed AI procedure (SMLT) to catch a couple of data's like, variable characteristic proof, uni-variate investigation, bi-variate and multi-variate examination, missing value medicines and dissect the data approval, data cleaning/getting prepared and knowledge illustration are done on the entire given dataset. Our examination provides a whole manual for responsiveness investigation of model boundaries on execution within the characterization of vertebrate upbeat. To propose AN AI based mostly and moreover, to seem at and examine the presentation of various AI calculations for the given dataset..

**EXISTING SYSTEM**

The death rate of under-five children in India declined last few decades, but few bigger states have poor performance. This is a matter of serious concern for the child's health as well as social development. Nowadays, machine learning techniques play a crucial role in the smart health care system to capture the hidden factors and patterns of outcomes.

In an existing system, the system used machine learning techniques to predict the important factors of under-five mortality. This study aims to explore the importance of machine learning techniques to predict under-five mortality and to find the important factors that cause under-five mortality. The data was taken from the National Family Health Survey-IV of Uttar Pradesh. We used four machine learning techniques like decision tree, support vector machine, random forest, and logistic regression to predict under-five mortality factors and model accuracy of each model. We have also used information gain to rank to know the important variables for accurate predictions in under-five mortality data.

**Disadvantages**

* Data visualization doesn't provide an important set of tools for gaining qualitative insights.
* Data visualization and exploratory data analysis are not all fields, and he would recommend diving deeper into some of the books mentioned at the end.

Proposed System

• The proposed model is to build a model to predict mortality. Collected data may contain missing values which may lead to inconsistencies. To get better results, the data should be preprocessed to improve the efficiency of the algorithm. Outliers should be removed and mutable conversions should also be performed. The data set collected to predict the given data is divided into training set and test set. In general, a ratio of 7:3 is applied to divide the training set and the test set. The data model created using machine learning algorithms is applied to the training set, and based on the accuracy of the test results, the prediction of the test set is made. The model can classify mortality. Different machine learning algorithms can be compared and the best algorithm can be used for classification.

**Advantages**

* The Naive Bayes algorithm is an intuitive method that uses the probability of each attribute belonging to each class to make predictions.
* Random forest or random decision forest is a synthetic learning method for classification, regression and other tasks, which works by building an infinite number of decision trees at the time of training and generating class as methods of classes (classification) or predictive mean (regression) of individual trees.

**SYSTEM REQUIREMENTS**

➢ **H/W System Configuration:-**

➢ Processor - Pentium –IV

➢ RAM - 4 GB (min)

➢ Hard Disk - 20 GB

➢ Key Board - Standard Windows Keyboard

➢ Mouse - Two or Three Button Mouse

➢ Monitor - SVGA

**SOFTWARE REQUIREMENTS:**

* **Operating system :** Windows 7 Ultimate.
* **Coding Language :** Python.
* **Front-End :** Python.
* **Back-End :** Django-ORM
* **Designing :** Html, css, javascript.
* **Data Base :** MySQL (WAMP Server).