MILK QUALITY PREDICTOR

Abstract :

This is an application which will predicts the quality of the milk by using the training data of milk based on it's nutrition components quantity.

Research Work :

The nutritional components of milk are **Carbohydrates , Fat , Proteins , Minerals , and Several Vitamins .**

Vitamins in milk are **Vitamin A, Vitamin B1, Vitamin B2, Vitamin B5, Vitamin B6, Vitamin B12, Vitamin C, Vitamin D, Vitamin E, Vitamin K.**

Minerals in milk are **Calcium, Copper, Iron, Magnesium, Phosphorus, Potassium, Selenium, Sodium, Zinc.**

Proteins in milk are **Glutamic Acid, Glycine, Alanine, Aspartic Acid, Leucine, Phenylalanine.**

Fats in milk are **Cholesterol, Fatty acids ... etc**

Carbohydrates in milk are **Lactose**

Based on this milk nutrition components we implement an algorithm that compute the qulity of milk based on respective decision tree .

Decision Tree:

A decision tree is a graphical representation of possible solutions to a decision based on certain conditions. It's called decision tree because it starts with single box (or root) , which then branches off into a number of solutions.

We will implement a decision tree for milk dataset using python sk.learn module.

We will divide the milk dataset into two types of dataset those are train dataset and test dataset .

By using train dataset we will create decision tree than will check this decision tree with test data.

Finally we will provide milk components details to this algorithm then it gives the quality of milk.

Pros :

- we can calculate the quality of the milk without using the test materials and human interactions.

- It reduces the human work and provides the milk quality result quickly.

Refernces :

- Python Pandas
- Python sk.learn
- Decision Tree