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Student Nutrition Tracker, Monitor System and Analysis

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Abstract: The Student Nutrition Tracker, Monitor System and Analysis in India is a comprehensive program aimed at addressing various issues related to education and nutrition on a nationwide scale. Implemented for primary and upper primary school students, it incentivizes increased school attendance by providing free meals, thereby ensuring access to education and reducing dropout rates. Additionally, the program contributes to disease prevention and promotes overall well-being through nutritious meals and education on hygiene and health. It fosters social equality by ensuring all children receive at least one nutritious meal daily, regardless of socio-economic background, breaking the cycle of poverty.

IndexTerms **– Student Nutrition Tracker, snt, Web Application, Database**

I. INTRODUCTION

Student Nutrition Tracker (SNT) is the world's biggest school lunch programme and is being implemented all over India for primary and upper primary school students. In 2012-2013, more than 104 million students were covered under the MDMS, and government agencies had created a huge infrastructure to feed children. The mid- day meal scheme is multi-faced programmed of the government of India that among other things seeks to address issues of food securities, lack of nutrition and access in education on a pan nation scale. It involves provision for free lunch on working days for children in primary and upper primary classes in government, government aided local body. With other objectives of improving nutritional status of children encouraging poor children, belonging to disadvantaged sections, to attend schools more regularly and help them enrolment, retention and attendance rates.

II. Motivation

Student Nutrition Tracker (SNT) scheme is a school nutrition program in India that aims to improve the nutritional status of school children and encourage regular attendance in school. The primary motivation behind the scheme is to address issues related to hunger and malnutrition among school children, promote education, and support social equality. By providing free and nutritious meals to students, the scheme ensures that children are not only well-fed but also motivated to attend school regular.

III. LITERATURE REVIEW

Sami Ben Jabeur, Hossein Ballouk, Wissal Ben Arfi, Jean-Michel Sahut, Artificial intelligence applications in fake review detection: Bibliometric analysis and future venues for research, Journal of Business Research, Volume 158,2023,113631, ISSN0148- 2963, https://doi.org/10.1016/j.jbusres.2022.113631

. Study of Dreze and Enrolment, Retention and Attendance: Many literatures suggest that the MDM scheme has led to substantial increase in the enrolment, retention and attendance of children. Many researches on primary education in India suggest that mid-day meals help in enhancing school participation especially among young girls.

Kingdom (2001) estimated that the provision of MDM in the local school is associated with a 50 per cent reduction in the proportion of girls who are out of school. In another instance of CES survey undertaken in 2003 in Chhattisgarh, Rajasthan and Karnataka it was found that mid- day meals have major impact on school participation of girls. The survey too suggests that school enrolment in the sample villages shot up after mid-day meals were introduced3. It also points significant improvement in daily attendance. Many parents reported that MDM had made it much easier for them to send their children to school in morning. Subsequently it has improved retention capacity

IV.NEED OF WORK

Nutritional Support: Malnutrition Prevention: Provides essential nutrients to children, preventing malnutrition and related health issues. Growth and Development: Proper nutrition aids in physical and cognitive development, crucial during the formative years.

Increased School Attendance: Incentive for Attendance: Acts as an incentive forparents to send their children to school regularly, ensuring the education. Reduced Dropout Rates: Helps in reducing dropout rates as children are encouraged to continue their education due to the benefits of the program.

Health Benefits: Disease Prevention: Proper nutrition strengthens the immune system, reducing the likelihood of diseases. Hygiene and Health Education: Often, the program includes education on hygiene and health, promoting overall well-being.

Community Development: Employment: Creates employment opportunities for local women who are often employed as cooks and helpers in the preparation and serving of meals. Community Involvement: Encourages community involvement and awareness about the importance of education and nutrition.

Cognitive Development: Improved Concentration: Proper nutrition enhances concentration and cognitive abilities, leading to better academic performance. Brain Development: Essential nutrients support brain development, aiding in better learning and understanding of subjects.

Long-term Impact: Economic Growth: Educated and healthy children are more likely to contribute positively to the economy in the long run, breaking the cycle of poverty. Social Welfare: Contributes to the overall social welfare and development of the nation by investing in the future generations. In summary, the Mid-Day Meal Scheme plays a vital role in ensuring the overall well-being of children, promoting education, reducing hunger, and fostering a healthier, more educated, and empowered society.

V.PROBLEM STATEMENT

The Student Nutrition Tracker, Monitor System and Analysis has been successful in increasing school attendance and improving the nutritional status of children.

VI.PROPOSED SYSTEM ARCHITECTURE

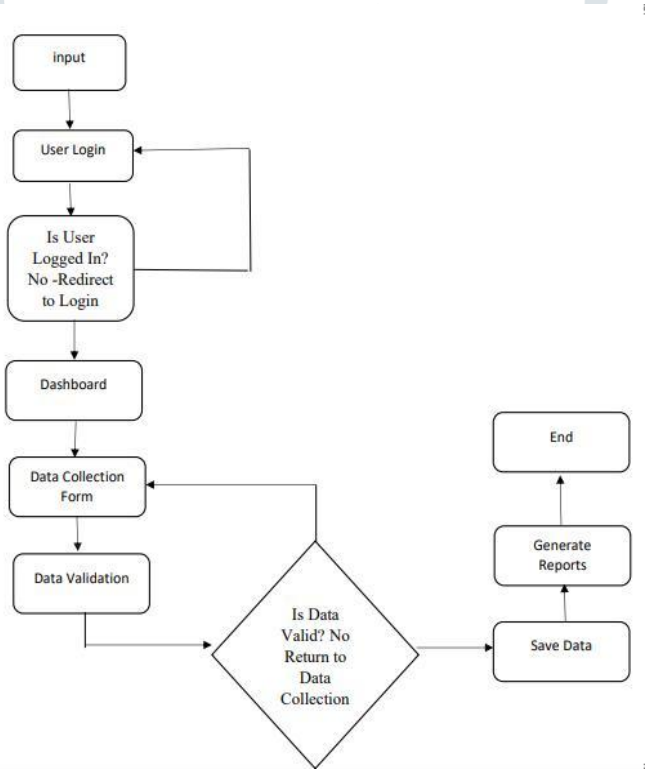

Fig: Proposed System Architecture

VII.METHODOLOGY

The proposed system uses hybrid approach in fake review detection, combining both machine learning and rule-based techniques.

The different module includes,

Module 1: Data Collection. Module

Module2: Data Pre-processingModule

Module 3: Sentiment Analysis.
Module 4: Hybrid Decision Making

Module 1: User Module

a. Register: school in-charge can register using their user id and password

b. Login: school in-charge can login with username and password.

c. Profile:

- school details
- logging data

User Module: Nutrition Calculation Module

Purpose: The User Module facilitates interaction between stakeholders (such as school administrators, cooks, teachers, and nutritionists) and the system for accessing nutritional information and conducting nutrition-related tasks within the Mid-Day Meal Scheme (MDMS)Mega Project. Functionality.

User Authentication: Allows users to log in securely with their credentials to access the system.

Dashboard: Provides an overview of key nutrition-related metrics and features, including recent meal data, nutritional insights, and upcoming tasks.

Nutrient Calculator: Enables users to calculate the nutritional content of mid-day meals basedon ingredients, portion sizes, and recipes. Users can input the quantities of various food itemsused in meal preparation, and the system calculates the total macro and micronutrient content accordingly.

Meal Planning: Allows users to plan balanced meals by selecting from a database ofstandardized recipes and portion sizes. Users can customize meal plans based on dietary guidelines, nutritional requirements, and regional preferences.

Nutritional Analysis: Provides detailed nutritional analysis reports for meals served under theMDMS, including calorie count, protein, carbohydrates, fats, vitamins, and minerals. Users can generate reports for individual meals, weekly menus, or custom date ranges.

Ingredient Database: Maintains a comprehensive database of food items commonly used in mid-day meals, including nutritional information per serving. Users can search, add, edit, or delete ingredients as needed.

Nutrition Education Resources: Offers educational materials, guides, and resources on nutrition, healthy eating habits, and meal planning for users to access and disseminate to students, parents, and staff.

Feedback and Suggestions: Allows users to provide feedback, suggestions, or concerns related to nutrition, meal quality, and program implementation. Feedback is logged and forwarded to relevant stakeholders for action.

User Module

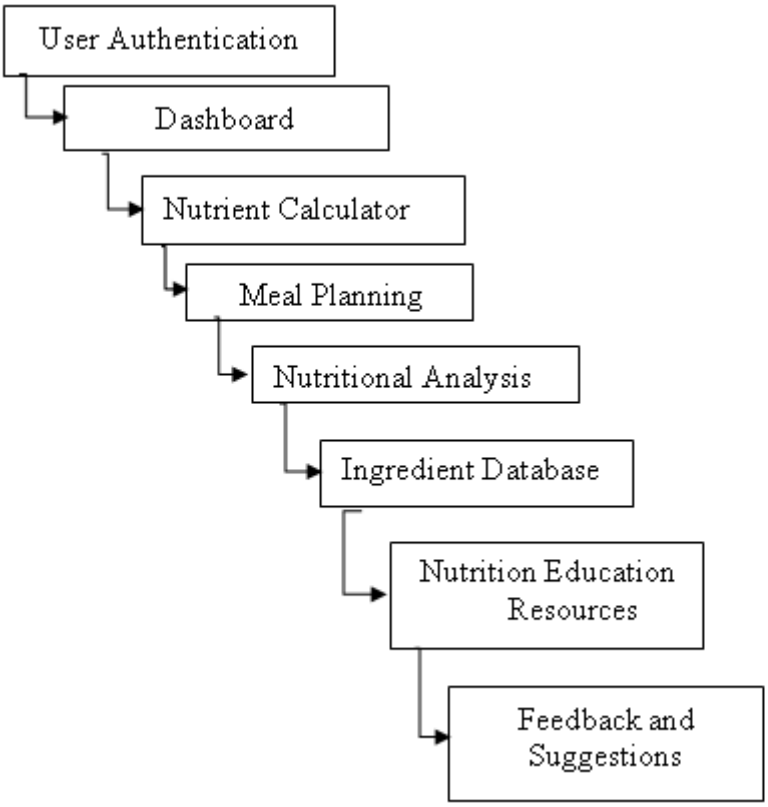

Fig: Project Life Cycle

VIII. REQUIREMENTS

- Preprocessor: Intel i5, RAM- 8gb
- Library: flask, SQL Alchemy.
- Language: Python 3.x, HTML, JS
- IDE: VS Code

IX.LIFE CYCLE

This project life cycle provides a structured approach for implementing a nutrition calculationsystem within the MDMS Mega Project, ensuring effective planning, development, implementation, and maintenance of the system to improve the nutritional quality of meals served to school children.

X.PROJECT LIFE CYCLE

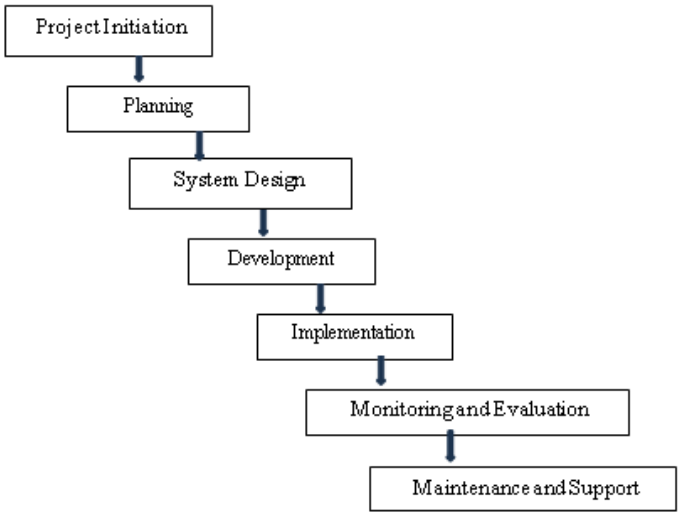

Fig: Project Life Cycle

XI.REFERENCES

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