

AI Based Government Scheme Awareness Tool

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ABSTRACT

The AI Based Government Scheme Awareness Tool is a smart web-based platform designed to help citizens easily identify government schemes according to their eligibility. In India, many welfare schemes are launched for students, farmers, women, senior citizens, unemployed people, and workers. However, many citizens are unaware of these schemes because information is spread across multiple government websites.

The proposed system uses Artificial Intelligence concepts along with frontend technologies to provide smart recommendations based on user details such as age, gender, profession, income level, and education qualification. The project is developed using HTML, CSS, JavaScript, and AI-based recommendation logic.

The system improves awareness, reduces manual effort, and provides direct access to official government websites. The responsive and multilingual design makes the platform accessible for different types of users

Keywords: Artificial Intelligence, Government Scheme Awareness, Recommendation System, Scheme Eligibility Analysis, Digital Governance, Personalized Recommendations, Web Application.

I. INTRODUCTION

Government welfare schemes play an important role in improving the quality of life of citizens by providing financial assistance, education support, healthcare benefits, agricultural subsidies, employment opportunities, and social security programs. Every year, various government departments introduce new schemes for students, farmers, women, senior citizens, workers, and economically weaker sections of society.

Despite the availability of these schemes, many eligible citizens remain unaware of the benefits because information is distributed across multiple government websites and portals. The process of searching for relevant schemes is often time-consuming and confusing, especially for users with limited digital literacy. Language barriers and complex eligibility criteria further reduce accessibility.

Recent research and technological developments have focused on improving digital governance and citizen-centric service delivery through web applications, recommendation systems, and artificial intelligence techniques. AI-based recommendation systems can analyze user information and provide personalized suggestions, thereby reducing manual effort and improving information accessibility.

To address these challenges, this research presents an AI Based Government Scheme Awareness Tool. The proposed system is a web-based platform that recommends suitable government schemes based on user details such as age, gender,

profession, income category, and educational qualification. The system utilizes HTML, CSS, and JavaScript to provide a responsive, user-friendly, and multilingual interface.

II.METHODOLOGY

The AI-Based Government Scheme Awareness Tool was developed to make it easier for people to find government schemes that match their needs and eligibility. When a user visits the website, they first enter their mobile number, which is checked using JavaScript to ensure that the input is valid. After successful verification, the user is directed to the main page, where details such as age, gender, profession, income category, education level, and preferred language are entered.

Once the user submits the information by clicking the "Find Schemes" button, the system analyzes the provided details and compares them with the available scheme data stored in the website database. Based on the user's profile, the application identifies and displays the most suitable government schemes. Each scheme includes important information such as its name, category, description, image, and official website link.

To improve usability, the website provides features such as a search bar, category-wise filtering, responsive scheme cards, a latest updates section, and an easy-to-use navigation menu. The design of the website is fully responsive, allowing users to access the platform smoothly from smartphones, tablets, laptops, and desktop computers.

A key feature of the project is the AI-based recommendation system. This module studies different user characteristics, including profession, age, gender, income level, educational background, and previous search preferences. Using this information, the system recommends schemes that are most relevant to the user's requirements. This approach helps users discover suitable schemes more quickly and reduces the effort required to search through multiple government portals.

The project was implemented using modern web technologies. HTML was used to create the structure of the website, CSS was used to design and style the interface, and JavaScript was used to handle user interactions, filtering operations, recommendation logic, language selection, and dynamic content updates. Together, these technologies provide a simple, efficient, and user-friendly platform for increasing awareness of government welfare schemes.

Keywords

Artificial Intelligence, Government Schemes, Scheme Recommendation System, Web Development, HTML, CSS, JavaScript, User Eligibility, Personalized Recommendations, Digital Government Services, Responsive Website, Search and Filtering, Welfare Programs, Smart Governance, User-Friendly Interface.

III.MODELING AND ANALYSIS

The proposed system follows a Rule-Based Recommendation Model for identifying suitable government schemes. The model collects user information such as age, gender, profession, income category, and education level. Based on predefined eligibility conditions, the system analyzes the user profile and recommends relevant government schemes.

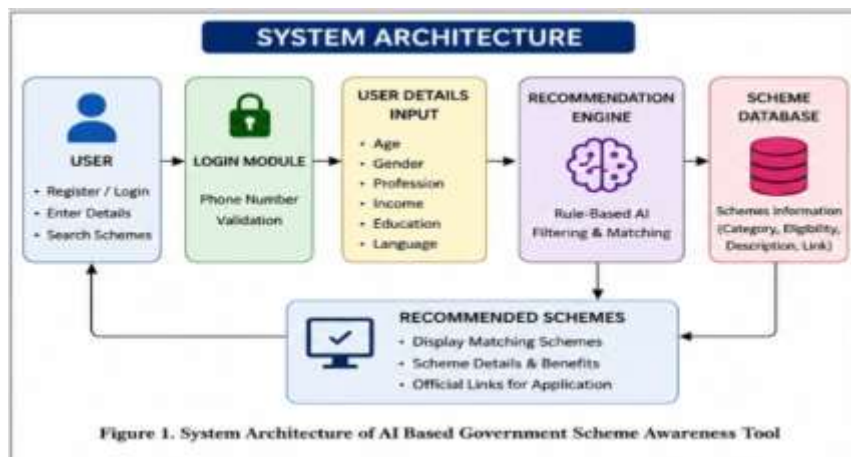


Fig. 1. System Architecture

The recommendation process consists of four stages:

1. User Data Collection

- Age
- Gender
- Profession
- Income Category
- Education Qualification

2. Data Processing

- Input validation
- Eligibility verification
- Category mapping

3. Recommendation Engine

- Matching user profile with scheme database
- Filtering schemes based on eligibility criteria

4. Output Generation

- Display of recommended schemes
- Direct application links
- Category-wise organization

IV.RESULTS AND DISCUSSION

The AI Based Government Scheme Awareness Tool was successfully developed and tested using various user profiles. The system demonstrated effective performance in identifying and recommending government schemes based on user eligibility criteria.

A. User Authentication

The login module successfully validated user phone numbers and allowed access to the system. Input validation reduced the possibility of incorrect data entry.

B. Scheme Recommendation Performance

The recommendation model analyzed user information such as age, gender, profession, income category, and educational qualification. Based on these inputs, the system displayed relevant government schemes accurately.

C. Search and Filtering Functionality

The search and filtering features enabled users to quickly locate suitable schemes. Profession-based filtering improved efficiency by reducing the time required for manual searching.

D. Multilingual Support

The system supported multiple languages, making the platform accessible to a wider audience. Users could easily switch between available languages and understand scheme information more effectively.

E. Responsive Design Analysis

The website was tested on mobile phones, laptops, and desktop computers. The responsive design adapted successfully to different screen sizes and maintained usability across devices.

F. Overall Discussion

The results indicate that the proposed system effectively improves awareness of government welfare schemes. By combining recommendation logic, search functionality, and multilingual support, the platform simplifies access to scheme information and enhances user experience. The system can be further improved through database integration, real-time government API connectivity, and advanced AI-based recommendation techniques.

MATERIALS AND TECHNOLOGIES USED			
Sr. No.	Component	Technology Used	Purpose
1	Frontend	HTML	Structure of web pages
2	Styling	CSS	Designing and layout of web pages
3	Scripting	JavaScript	Filtering, validation and recommendation logic
4	IDE	Visual Studio Code	Development environment
5	Browser	Google Chrome	Testing and execution
6	AI Logic	Rule-Based Recommendation	Scheme recommendation based on eligibility
7	Data Source	Government Websites	Collection of scheme information
8	Database (Future Scope)	MySQL / MongoDB	Data storage and management

Table 1. Materials and Technologies Used

TABLE I. MATERIALS AND TECHNOLOGIES USED

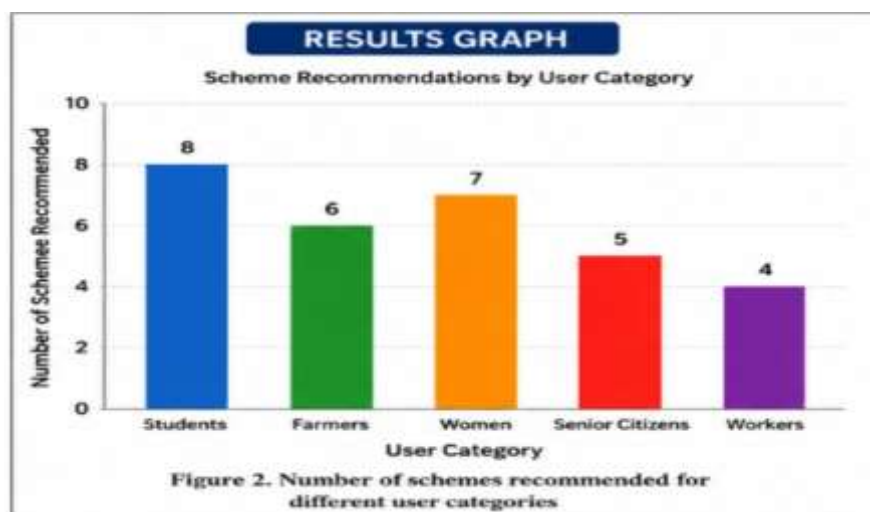


Fig. 2. Number of Schemes Recommended for Different User Categories

V.CONCLUSION

The AI Based Government Scheme Awareness is a useful and practical web project that simplifies the process of finding government schemes. The project successfully reduced confusion and manual effort by organizing all information in one place.

Using HTML, CSS, and JavaScript, the system demonstrated how frontend technologies can create responsive and user-friendly applications. Features such as profession-based filtering, multilingual support, responsive design, and search functionality improved usability and accessibility. The project also helped improve practical knowledge related to frontend development, responsive design, filtering systems, and dynamic web applications. Overall, the project achieved its objectives successfully and proved that technology can improve digital accessibility and government service awareness.

VI.ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to everyone who helped me in the successful completion of this project titled " AI Based Government Scheme Awareness Tool".

First of all, I would like to thank God for giving me the strength, knowledge, and ability to complete this project successfully.

I am deeply grateful to my project guide Mr. Praveen. P. Naik, Department of Computer Science of Sangolli Rayanna First Grade College, for the invaluable guidance, continuous support, motivation, and constructive feedback provided throughout the development of this project. Without their expert advice, this project would not have been possible.

I would also like to thank our principal Prof. S. C. Patil Sir, for his support and encouragement throughout the process.

I would also like to thank the Head of Department, Dr. T. R Arun Kumar, Department of Computer Science , for providing all the necessary facilities and resources required to complete the project.

I am thankful to all the faculty members of the Department of Computer Science for their guidance and encouragement during the course of this project.

Finally, I am forever grateful to my parents and family members for their continuous moral support, love, and encouragement that helped me to stay focused and complete this project.

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