

Bharat Citizen Portal: A One-Stop Window for Different Govt. Schemes

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Abstract— *The proposed system is a web application that enables Citizens of India to avail of the various centralized schemes sanctioned by the Government of India. The job of this system is to efficiently collect information and inform people about their status regarding their applications. The applicants explore utilizing features from the Government Sanctioned Schemes and utilized for procuring necessary data for further analysis for the citizens and availing various schemes by giving them pointers. Then the research also includes a thorough evaluation of the applicants' details and inform them. This system also aims to enhance the effectiveness of finding appropriate schemes for the applicant and helping genuine candidates get benefits of Schemes from the Government. The project is mostly about detecting relevant information and the irrelevance of the applications to avail various resources from the government to the citizens using Big Data Analytics. The whole project is divided into two main phases: analyzing the applications with a suitable set of Machine Learning algorithms and then training machine and Deep Learning methods on derived features to recognize correct and wrong information. The website is built on interactive frontend web technology and Data Structures for extracting various types of information by executing backend code while dynamic analysis extracts features during code execution or emulation on the data in a database.*

Indexed Terms- *Web application, Deep Learning methods, Interactive user interface technology, big data analytics, Machine Learning algorithms, Dynamic analysis, Artificial Intelligence (AI), Relational database technology.*

I. INTRODUCTION

Houses, pensions, provident funds, etc. are the basic human requirements. Even after 70 years of independence, India is still grappling with the growing housing, pension, and other necessity problems, especially for the citizens and providing a pucca

house, pensions, provident funding, etc. with basic amenities to all houseless households. To tackle the problem of homelessness the government launched over the past few years many schemes in recent years and tried to bridge the gap between demand and supply of houses. By taking all these government schemes as a reference we are making an application where all the schemes can be accessed from our application Bharath citizen portal. This system also aims to enhance the effectiveness of finding appropriate schemes for the applicant and helping genuine candidates get benefits of Schemes from the Government.

II. RELATED WORK

The primary research objective is to conduct an in-depth analysis of government schemes, with a specific focus on education loans, home loans, provident funds, and pensions. The study aims to understand the effectiveness and impact of these schemes in promoting financial inclusion and social welfare. It seeks to evaluate the accessibility and reach of these schemes, identifying any barriers or challenges beneficiaries face. Additionally, the research intends to assess the economic and social outcomes of these schemes, including their role in promoting education, homeownership, retirement security, and financial stability. This research aims to shed light on their performance, assess their impact on the targeted beneficiaries, and identify potential areas of improvement. The specific objectives of this research can be outlined as follows. Government schemes in India are instrumental in addressing various socio-economic challenges and improving the quality of life for its citizens.

The following schemes that are availed by the government for the citizens of India are.

A. Pradhan mantra was yojana:

Pradhan Mantri Awas Yojana (PMAY) is a flagship affordable housing scheme launched by the Government of India in June 2015. The primary objective of PMAY is to provide affordable housing to all eligible beneficiaries in urban and rural areas across the country. PMAY is a government initiative aimed at providing affordable housing to all citizens by 2022. PMAY also facilitates credit enhancement through various measures to increase the availability of institutional credit for housing needs. Beneficiaries can apply for PMAY through an online portal, making the process more accessible and transparent.

Objective: The main aim of PMAY is to ensure that every Indian has access to a pucca house with basic amenities by the year 2022[1]. It targets economically weaker sections (EWS), low-income groups (LIG), and middle-income groups (MIG).

Components: PMAY has two main components:

- Pradhan Mantri Awas Yojana (Urban): This component focuses on providing affordable housing to urban areas.
- Pradhan Mantri Awas Yojana (Gramin): This component aims to provide affordable housing to rural areas.

Beneficiaries: The scheme targets various categories of beneficiaries including economically weaker sections (EWS), low-income groups (LIG), middle-income groups (MIG), women, minorities, and differently-abled individuals [2].

Subsidy: PMAY provides interest subsidy on home loans to eligible beneficiaries.

Overall, PMAY is a significant initiative by the Government of India to address the housing needs of the urban poor and promote inclusive urban development across the country.

B. Employee Provident Fund:

Employee Provident Fund (EPF) [7] is a savings scheme initiated by the Government of India to help employees save a portion of their salary every month. It is a mandatory retirement savings scheme for

employees working in organizations covered under the EPF Act, of 1952. Provident Fund schemes are designed to provide financial security and stability to employees. The Employees' Provident Fund (EPF) is a social security scheme that provides retirement benefits.

Objective: The objective of the Employees' Provident Fund (EPF) is to provide financial security and stability to employees during their retirement years [11].

Tax Benefits: Contributions made towards EPF are eligible for tax benefits under Section 80C of the Income Tax Act, 1961 [8]. Additionally, the interest earned on EPF contributions is tax-free, and withdrawals after a certain period are also tax-exempt under specified conditions.

Interest Rate: The EPF interest rate is determined by the Government of India in consultation with the Employees' Provident Fund Organization (EPFO). The interest rate is usually announced annually. Historically, it has been higher than most other fixed-income savings instruments [13].

EPF Account: Each employee covered under EPF has a unique EPF account number provided by the EPFO. This account remains active throughout the employee's working life and serves as a record of contributions and withdrawals [10].

Withdrawals: Employees can withdraw from their EPF account under certain circumstances such as retirement, resignation, medical emergencies, marriage, education, or purchasing a house. However, there are specific rules and conditions governing each type of withdrawal.

Overall, the objective of the Employees' Provident Fund is to promote financial stability, social security, and employee welfare by facilitating long-term savings and providing a reliable source of income during retirement.

C. Vidya Laxmi yojana:

It was launched in January 2022, there isn't a widely recognized government scheme called "Vidya Laxmi Yojana" in India. However, there are several

educational schemes and initiatives launched by the Indian government aimed at providing financial assistance and support to students pursuing higher education. The Vidya Lakshmi scheme is a government initiative in India that aims to simplify and streamline the process of obtaining education loans and scholarships. Vidya Lakshmi is a portal that provides a single-window platform for students to access information about educational loans. It allows students to apply for and track the status of their loans from multiple banks [3].

D. Atal pension yojana:

Atal Pension Yojana (APY) is a government-backed pension scheme in India, launched by the Government of India on May 9, 2015 [5]. It is primarily targeted at the unorganized sector. APY is a pension scheme focused on unorganized sector workers. It encourages them to voluntarily save for their retirement by contributing regularly to the pension account.

Objective: The primary objective of APY is to provide a pension scheme for unorganized sector workers to ensure a minimum monthly pension payout after they attain the age of 60 years [14].

Eligibility: Any citizen of India, aged between 18 to 40 years, is eligible to join the Atal Pension Yojana. The individual must have a valid bank account to enroll in the scheme [15].

Pension Amount: The pension amount under APY ranges from Rs. 1,000 to Rs. 6,000 per month, depending on the contributions made by the subscriber. The pension amount is fixed and guaranteed by the government [6].

Nominee Facility: APY allows subscribers to nominate a beneficiary who will receive the pension amount in case of the subscriber's demise before attaining the age of 60 years.

Enrollment Process: Interested individuals can enroll in the Atal Pension Yojana through participating banks or the National Pension System (NPS) architecture [9].

These are just a few of the many government schemes in India. The government continues to introduce new schemes and initiatives to address the diverse needs of

the population and drive inclusive growth. Schemes are often implemented at both the central and state levels to cater to specific regional and demographic requirements. The effectiveness of these schemes in achieving their goals can vary, and evaluation and monitoring are essential to ensure their success [4].

III. METHODS AND EXPERIMENTAL DETAILS

The Bharath Citizen portal is a technological solution aimed at bridging the gap between citizens and the various government schemes. It acts as a centralized platform, offering citizens easy access to a plethora of central government initiatives related to finance, housing, and other crucial areas. The primary goal is to enhance transparency, efficiency, and awareness regarding government programs.

One of the key technical features of the portal is its user-friendly interface. The design prioritizes accessibility, ensuring that citizens from diverse demographics can navigate the platform effortlessly. This inclusivity is crucial in reaching a wide audience and ensuring that the benefits of government schemes are accessible to all.

Security is a paramount concern, and the Bharat Citizen Portal incorporates robust measures to safeguard user data. Secure login features are implemented to protect the confidentiality of user information. This includes encryption protocols, multi-factor authentication, and other advanced security measures. These mechanisms ensure that citizens can trust the platform with their details, fostering confidence in the system.

The portal serves as a comprehensive guide for citizens within the intricate landscape of government schemes. It addresses the common issue of citizens being unaware of available programs or not understanding the application process. Through a well-organized and easily navigable interface, citizens can explore the various schemes, understand eligibility criteria, and initiate the application process seamlessly.

One innovative aspect of the system is its monitoring capabilities. The portal acts as a corrective tool,

identifying loopholes in the government's monitoring system. This enables better oversight, reducing the chances of citizens being misguided or overlooked in the process. By providing real-time updates and feedback mechanisms, the system contributes to the overall improvement of government service delivery.

Moreover, the Bharat Citizen Portal encourages civic participation. Citizens can use the platform to submit complaints, provide feedback, and actively engage with the government. This two-way communication fosters a sense of accountability and responsiveness, making the government more attuned to the needs and concerns of the citizens.

In summary, the Bharat Citizen Portal stands as a testament to the integration of technology for the betterment of governance. Through its user-friendly design, stringent security measures, and proactive monitoring capabilities, it addresses the challenges citizens face in navigating government schemes. This technological innovation not only facilitates access to benefits but also promotes a more transparent and participative relationship between the government and its citizens.

Experimental details:

The methodology for the research paper involves a comprehensive process for handling user data and ensuring the security and accuracy of the information within a web application.

A. User Interface and ID Creation:

The initial step involves the user inputting valuable and confidential data on the starting page of the web application. This data is then processed and integrated into the system using various data structures to efficiently manage and organize the information. Upon inputting the data, users are redirected to view the schemes available on the platform. The relevant data is collected and stored in a database, and a unique identifier (ID) is generated for each user. This unique ID serves as a key that is responsible for providing users with the status of their application to the available schemes on the web application.

B. Guidance through chatbot:

To guide users through the application process and address any queries they may have, a chatbot is

employed. This chatbot assists users in filling in necessary details in the respective fields and offers support throughout the application procedure. The integration of a chatbot enhances user experience and ensures a smoother application process.

C. Status Updating:

Following the submission of user data and completion of the application process, users must wait for the status of their application. This waiting period may extend over several days, weeks, or even months, depending on the specific schemes and processing timelines. The system employs various datasets and machine learning algorithms to develop a model responsible for validating user data.

D. Validation:

The validation model utilizes previous applications and datasets to check for fraudulent or redundant data. Machine learning algorithms analyze the input data and output of training models to identify patterns and anomalies, ensuring the accuracy and legitimacy of the information submitted by users. This approach enhances the system's ability to identify and prevent fraudulent activities, ultimately improving the reliability and security of the web application. The Bharat Citizen Portal operates in collaboration with relevant government departments to ensure accurate and up-to-date information.

In summary, the methodology encompasses secure data handling, efficient integration of data structures, user guidance through a chatbot, and the utilization of datasets and machine learning algorithms for validating user data and preventing fraudulent activities in the web application.

Flow chart:

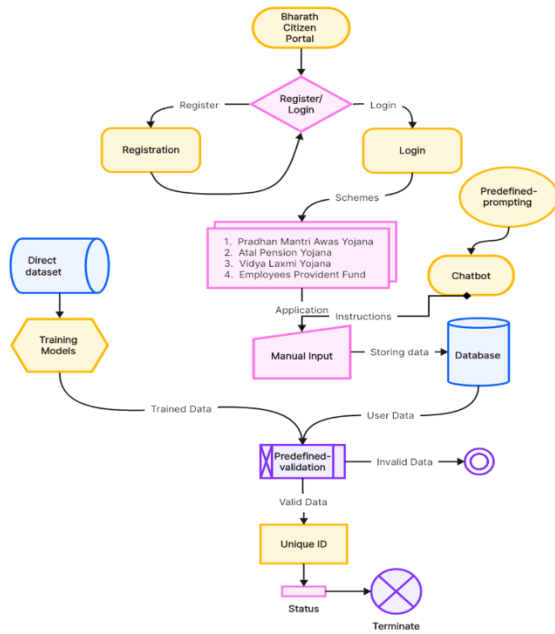


Fig Architecture of the model

IV. RESULT AND DISCUSSION

The implementation of the existing solutions is that they are on different websites and the status of their application is not updated. The applicants have to personally check their application status and the ones who can't have to wait for the final announcement if any for the applications. It makes it difficult for a single applicant to manage all his/her applications on different websites and cross over to them and have to get familiar with their method of checking status. The users have to spend some time learning the interfaces of different applications or have to spend some amount on applying with the help of some professionals. They usually don't get any material to guide them through the whole process.

The Bharat Citizen Portal has successfully streamlined the application process for PMAY, resulting in a significant increase in housing applications and approvals. The portal's efficiency in processing housing applications has led to tangible outcomes, such as a reduction in homelessness and improved living conditions for economically weaker citizens.

It has contributed to the government's goal of ensuring housing for all. The Bharath Citizen Portal has significantly expedited the application and approval

process for PMAY housing schemes, leading to a substantial increase in the number of citizens obtaining affordable housing. The government schemes like PMAY, APY, EPF, and VLY are availed to improve the living of the citizens of India.

PMAY:

The impact of PMAY in addressing housing needs, improving living conditions, and reducing homelessness. The portal's contribution to achieving the government's housing for all goals. It has significantly reduced homelessness and improved living conditions, contributing to social and economic development. The portal has played a pivotal role in achieving the government's "Housing for All" mission, making affordable housing accessible to a wider section of the population.

Atal Pension Yojana:

The role of APY is to ensure financial stability for individuals in their retirement years, promoting financial inclusion, and reducing the burden on the social security system. APY's integration into the portal has made it easier for citizens to secure their financial future.

Employees' Provident Fund:

The significance of EPF in ensuring financial security for employees after retirement, enhancing transparency, and promoting responsible savings. The portal's enhancements to the EPF system have modernized and simplified the management of employee provident funds, benefiting both workers and employers. This improved transparency and efficiency ensure that employees' retirement savings are secure and readily accessible when needed, contributing to their financial well-being after retirement.

Vidya Laxmi Yojana:

The impact of the scheme on making higher education more accessible, empowering students with better financial opportunities, and ultimately enhancing the nation's human capital. The inclusion of the Central Sector Interest Subsidy Scheme in the portal emphasizes the government's commitment to higher education and skill development. The streamlined application process has expanded access to affordable

educational loans, allowing more students to pursue higher education and, in turn, bolstering the nation's human capital.

By taking all these government schemes as a reference we are making an application where all the schemes can be accessed from our application Bharat Citizen Portal. The applicants explore utilizing features from the Government Sanctioned Schemes and utilized for procuring necessary data for further analysis for the citizens and availing various schemes by giving them pointers. This system also aims to enhance the effectiveness of finding appropriate schemes for the applicant and helping genuine candidates get benefits of Schemes from the Government.

CONCLUSION

The Bharat Citizen Portal is a comprehensive online platform designed to streamline access to various central government schemes, promoting transparency and efficiency in delivering services to citizens across India. It has emerged as a transformative platform that has streamlined access to key government schemes, including Pradhan Mantri Awas Yojana, Atal Pension Yojana, Vidya Laxmi Yojana, and Employee Provident Funds. These benefits are for the citizens but the lack of awareness of schemes and the ways to avail them renders such ideas useless. The system is a guide to citizens within the loop and mess of the schemes and facilities that are sanctioned by the government. It has had a profound impact on the socio-economic landscape of India, addressing critical areas of housing, retirement security, higher education, and financial stability. The simplified application process has empowered more students to pursue higher education, enriching the nation's human capital and contributing to its growth.

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