

SENIORCONNECT: A VOICE-ENABLED MOBILE PLATFORM WITH REGIONAL LANGUAGE SUPPORT FOR ELDERLY WELL-BEING AND GOVERNMENT SCHEME ADVISORY ACROSS INDIA

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Introduction:

India has a very large and growing elderly population, but many of them struggle to use digital platforms. Even though the government provides many useful schemes for pensions, healthcare, and welfare, seniors often cannot access them easily. This is mainly because of low digital literacy, language barriers, and confusing online processes. Most existing apps are designed for younger, tech-savvy users, not for elderly people.

Because of this gap, many senior citizens miss out on benefits they truly need. This can also make them feel isolated, dependent on others, and sometimes even ignored in today's digital world.

Senior

Connect is created to solve this problem in a simple and practical way. It is a voice-based mobile platform that allows elderly users to interact using their own language. Instead of typing, they can just speak and get information easily. This makes the system more natural and comfortable for them.

The platform also includes features like large icons, simple navigation, and clear guidance. It not only helps with government schemes but also gives support related to health, care, and pensions. This makes it a complete solution for elderly needs.

By using voice technology, SeniorConnect reduces confusion and saves time. It helps seniors make their own decisions without depending on others. Overall, it connects elderly people to the digital world, making them feel confident, respected, and independent.

Objectives:

1. The project aims to develop a simple and user-friendly mobile app specially for senior citizens.
2. It will be voice-enabled, allowing users to speak instead of typing.
3. The app will support multiple languages for better understanding.

4. It will have a clean interface with large text and icons for easy use.
5. The system will provide guidance on government schemes based on user eligibility.
6. It will help seniors understand and apply for schemes without confusion.
7. Mental well-being support will be included through services like Tele-MANAS.
8. The app will ensure privacy by using only minimal personal data.
9. It will also provide optional caregiver support for additional help.
10. Overall, the app aims to make seniors more independent and confident in using digital services.

Methodology:

1. The methodology of SeniorConnect is designed mainly for senior citizens, focusing on simplicity and ease of use. It follows a voice-first approach where users can speak instead of typing, reducing confusion and effort. The system avoids complex steps and heavy text, making it easier for elderly users to understand. The requirements are based on real problems such as low digital literacy, language barriers, fear of making mistakes, and poor internet connectivity, especially in rural areas.
2. The application supports voice queries and multiple languages, using speech-to-text to understand user input and text-to-speech to provide responses. It also includes simple confirmations like yes/no options and fallback methods if voice recognition fails. Information is presented in the user's own language with simple and culturally familiar words, helping them relate better.
3. The system suggests government schemes based on basic details like age, income, and location, while collecting only minimal personal data to ensure privacy. The interface is designed with large icons, clear text, and limited options, allowing users to easily repeat, cancel, or correct actions. Trust is built by clearly explaining data usage and avoiding complex login processes.
4. Finally, the system is continuously improved by observing user behavior such as errors and task completion. Overall, the methodology ensures that the application is simple, secure, and highly suitable for elderly users.

Result and Conclusion:

1. The results of the SeniorConnect system show a clear improvement in how elderly users interact with government welfare information. Users were able to easily enter details like age, income, and location through a simple conversational flow, showing good usability. The scheme recommendation system worked correctly, providing relevant suggestions based on user inputs, which proves the reliability of the backend system. The multi-language support, especially in regional languages like Kannada, helped reduce confusion and increased user confidence. The interface design with large buttons, simple layout, and voice support made navigation easy and reduced user stress.
2. The inclusion of voice prompts guided users step-by-step, reducing errors and task abandonment. The mental wellbeing features such as relaxation and breathing exercises added extra value beyond just scheme guidance. The system also ensured privacy by collecting minimal data while maintaining transparency. User interactions showed reduced hesitation and improved comfort while using the app. Overall, the

findings indicate that SeniorConnect successfully bridges the digital gap for elderly users by providing a simple, accessible, and trustworthy platform, enabling them to independently access services and feel more confident in using digital technology.

Project Outcome & Industry Relevance:

1. The SeniorConnect project has strong practical impact by making government services more accessible to elderly people in real life. It helps senior citizens easily find and understand welfare schemes using voice, reducing the need for physical visits or external help. By removing language and literacy barriers through regional voice support, it allows even low-educated users to confidently use digital systems. This directly improves digital inclusion and reduces dependency on family members or agents.
2. The integration of mental well-being support like Tele-MANAS adds real value by addressing emotional needs such as stress and loneliness, which are common among seniors. The project also contributes to the field of human-computer interaction and digital inclusion by showing how voice-first, simple, and culturally adapted design can improve usability for elderly users.
3. In real-world settings, this system can be used by government departments, NGOs, and healthcare services to reach a wider elderly population. It can be deployed as a mobile app or integrated into public service centers, especially in rural and low-income areas. Overall, the project demonstrates a scalable solution that improves access, trust, and independence for senior citizens in digital environments.

Working Model vs. Simulation/Study:

1. The project involves the development of a working model in the form of a functional mobile application.
2. SeniorConnect is implemented with voice interaction, multilingual support, and scheme advisory features. It includes real user interaction flows and backend data handling for recommendations.
3. The system has been tested through user inputs and database responses. Hence, it is not just a simulation but a practical, working prototype

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Future Scope:

The future scope of this project includes:

1. The system can be improved by adding more regional languages and dialect support for better accessibility.
2. Advanced AI models can be integrated to give more accurate and personalized scheme recommendations.
3. Offline features can be enhanced to support users with very low or no internet connectivity.
4. Integration with government databases can enable direct application submission through the app.
5. More health-related services like teleconsultation and reminders can be added for elderly care.
6. Future research can focus on improving voice accuracy in noisy environments and adapting to different user behaviours.