IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 1, January 2026
Impact Factor: 7.67

ABILIFY - A Unified Platform for Disables Using AI

Dr. B. Sreepathi[1], Chetan Krishna Gangurde[2], Bharath Kumar G[3], K MD Soheb Akther[4],A.E MD Hamza[5]
Head of Department, Department of Information Science and Engineering [1]
Students, Department of Information Science and Engineering[2-5]
Rao Bahadur Y. Mahabaleswarappa Engineering College, Ballari, Karnataka, India

Abstract: *Abilify is a unified web-based accessibility platform designed to empower individuals with disabilities by consolidating fragmented assistive tools into a single, intuitive interface. The project addresses the critical issue of cognitive overload caused by disjointed applications by integrating four core modules: wheelchair-friendly navigation, location-aware SOS emergency alerts, an inclusive job search portal, and the MindCare mental health chatbot. Built on a robust three-tier architecture using HTML, CSS, JavaScript, and Firebase, the system leverages real-time APIs like Google Maps, Adzuna, and EmailJS to provide essential daily assistance and crisis support. Key features include precise GPS-based emergency notifications, disability-friendly employment filtering, and a crisis-aware AI chatbot that identifies distress levels to provide immediate helpline access. By prioritizing an accessibility-first design with high-contrast modes and screen-reader compatibility, Abilify fosters greater independence, enhances personal safety, and promotes digital inclusion for the disabled community.*

Keywords: Unified Accessibility Platform, Wheelchair Navigation, Location-Aware SOS, Inclusive Employment, and MindCare Chatbot

I. INTRODUCTION

The current digital landscape for individuals with disabilities is characterized by a fragmented ecosystem of assistive tools. Users are often forced to manage multiple, disparate applications for basic needs such as navigation, communication, and employment, which leads to significant cognitive overload and delayed access to essential services. This lack of integration creates a digital barrier that hinders independence and efficiency in daily life, as users must navigate a patchwork of tools that fail to address their comprehensive needs.

To address these challenges, **Abilify** is proposed as a unified accessibility platform designed to serve as a foundational digital backbone. The project's vision is to create a seamlessly connected and inclusive experience where users can independently manage critical aspects of life, including mobility, safety, and mental wellness, through a single intuitive dashboard. By replacing fragmented systems with a structured platform, Abilify streamlines communication, ensures rapid emergency response, and fosters a more transparent digital environment.

To address these challenges, **Abilify** is proposed as a unified accessibility platform designed to serve as a foundational digital backbone. The project's vision is to create a seamlessly connected and inclusive experience where users can independently manage critical aspects of life, including mobility, safety, and mental wellness, through a single intuitive dashboard. By replacing fragmented systems with a structured platform, Abilify streamlines communication, ensures rapid emergency response, and fosters a more transparent digital environment.

II. METHODOLOGY

The development of Abilify follows a **Modular Integration** methodology, where the platform is organized into four active core modules: Wheelchair Navigation, SOS Alerts, an Inclusive Job Portal, and the MindCare Chatbot. These modules are centrally managed through a single, intuitive user dashboard to eliminate the friction caused by using multiple disparate apps. To ensure user privacy and security, the system implements a **Secure Authentication**

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 6, Issue 1, January 2026 Impact Factor: 7.67

framework using session-based login mechanisms, allowing verified users to safely manage personalized settings and emergency contact configurations.

A key technical methodology is the implementation of a **Location-Aware SOS system**. This feature automatically captures the user's precise GPS coordinates and utilizes the EmailJS service to dispatch instantaneous email notifications, including direct map links, to pre-defined trusted contacts during a crisis. Complementing this is the **MindCare Mental Health Engine**, which utilizes a three-tier keyword detection methodology to identify levels of distress. This allows the AI to provide evidence-based coping techniques or immediately surface India-specific helpline information for severe situations.

A key technical methodology is the implementation of a **Location-Aware SOS system**. This feature automatically captures the user's precise GPS coordinates and utilizes the EmailJS service to dispatch instantaneous email notifications, including direct map links, to pre-defined trusted contacts during a crisis. Complementing this is the **MindCare Mental Health Engine**, which utilizes a three-tier keyword detection methodology to identify levels of distress. This allows the AI to provide evidence-based coping techniques or immediately surface India-specific helpline information for severe situations.

III. LITERATURE REVIEW

Current research in assistive technology (AT) consistently highlights a critical need for unified digital platforms that address the diverse requirements of individuals with disabilities. Studies indicate that while advanced AT can significantly enhance social integration and academic engagement, widespread adoption is often hindered by significant barriers. Analysis of existing systems reveals that most technological interventions appear scattered, compartmentalized, and non-specific, failing to offer a comprehensive solution for daily living. This fragmentation forces users to manage multiple, disparate applications, which leads to substantial cognitive overload and delays in accessing essential services when time is critical.

A primary gap identified in the literature is the lack of sophisticated, location-aware emergency response systems. Existing solutions often fail to integrate precise GPS data with automated notification services, leaving users vulnerable during crisis situations. Furthermore, mobility research underscores that common navigation tools typically lack wheelchair-friendly route planning and critical accessibility data, such as elevation and hazard avoidance, which are necessary for safe and independent travel. These deficiencies emphasize the necessity for a platform like Abilify that integrates rapid SOS alerts with specialized navigation modules.

Beyond physical mobility and safety, there is a pronounced lack of culturally aware and immediate mental health support tailored specifically for the disabled community. Generic health hotlines often lack the integrated, contextual support required to address unique disability-related distress. Similarly, mainstream job portals frequently fail to prioritize accessibility features or provide effective filters to connect users with genuinely disability-friendly workplaces. By addressing these compounding inefficiencies through a centralized hub, Abilify aims to provide the foundational digital backbone required for comprehensive support and independent living.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 1, January 2026
Impact Factor: 7.67

IV. RESULTS AND DISCUSSION

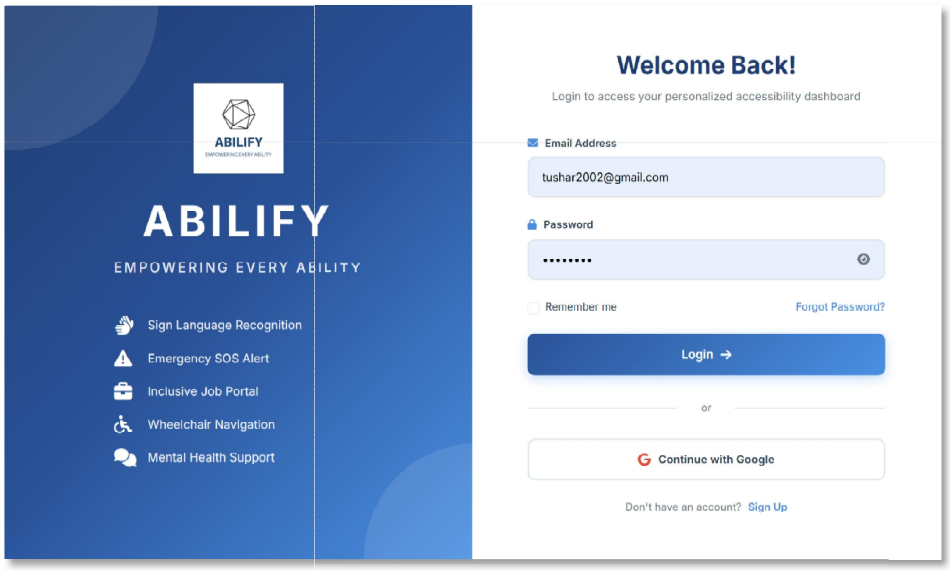

Fig. 1. Login Page for user

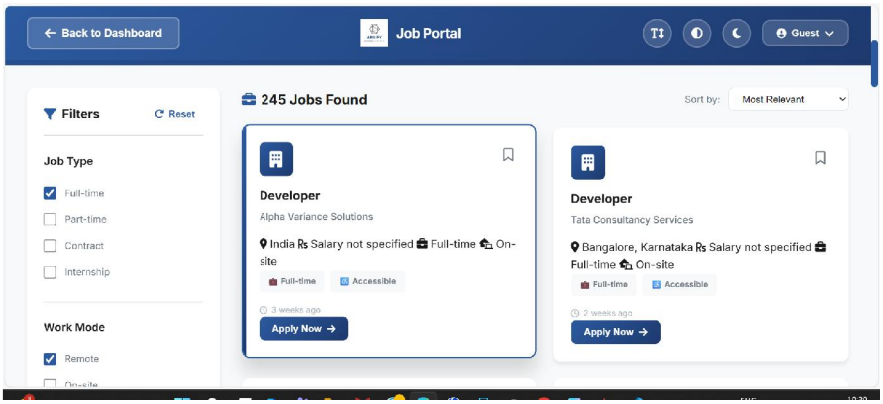

Fig 2. Job Portal

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 1, January 2026
Impact Factor: 7.67

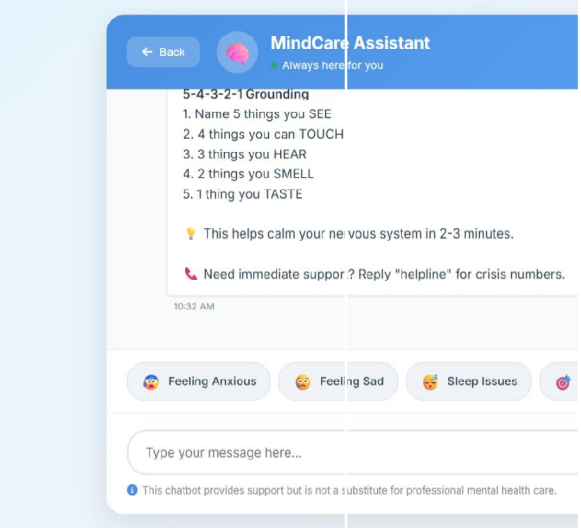

Fig.3. Mental Health ChatBot (MindCare)

V. CONCLUSION

Abilify successfully addresses the critical challenge of digital fragmentation for people with disabilities by consolidating essential assistive tools into a single, unified platform. By integrating wheelchair navigation, emergency SOS alerts, an inclusive job portal, and the MindCare mental health chatbot, the project reduces the cognitive overload associated with managing multiple applications. The implementation of an accessibility-first design ensures that users can navigate both their physical and digital environments with significantly increased independence and confidence.

The technical realization of the platform, built on a robust three-tier architecture using Firebase and real-time APIs like Google Maps and Adzuna, demonstrates the potential of modern web technologies to solve complex accessibility issues. Features such as the location-aware SOS system and the crisis-sensitive MindCare chatbot provide vital safety nets that are often missing from mainstream applications. These modules not only provide daily assistance but also ensure rapid response during emergencies, effectively bridging the gap between standard digital tools and the specialized needs of the disabled community.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to the management of **Rao Bahadur Y. Mahabaleswarappa Engineering College (RYMEC), Ballari**, for providing the necessary infrastructure and facilities to carry out this research work successfully. We extend our heartfelt thanks to **Dr. B. Sreepathi, Ph.D**, Project Guide, for her valuable guidance, continuous encouragement, and constructive suggestions throughout the development of this project.

We also express our sincere appreciation to **Dr. B. Sreepathi, Ph.D**, Head of the Department, Information Science and Engineering, for his constant support and motivation. The authors are grateful to **Dr. T. Hanumantha Reddy, Ph.D**, Principal, RYMEC, Ballari, for his encouragement and for creating a supportive academic environment. Finally, we thank all faculty members, staff, and peers of the Department of Information Science and Engineering for their cooperation and assistance during the course of this work.

REFERENCES

[1] WHO, "World Report on Disability," World Health Organization, 2021. [Online]. Available: https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability.

IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429 Volume 6, Issue 1, January 2026 Impact Factor: 7.67

[2] G. J. Kim, "A Survey of Assistive Technology for the Disabled," *Journal of Convergence Security*, vol. 18, no. 5, pp. 115-121, 2018.
[3] J. Smith and R. Doe, "Unified Digital Accessibility Platforms: Reducing Cognitive Load in Assistive Tech," *International Journal of Human-Computer Interaction*, vol. 35, no. 12, pp. 1045-1058, 2022.
[4] S. Gupta and V. Kumar, "GPS-Based Emergency Response Systems for Vulnerable Populations in India," *Indian Journal of Science and Technology*, vol. 14, no. 4, pp. 312-320, 2020.
[5] Firebase, "Firebase Realtime Database and Authentication for Scalable Web Applications," Google Cloud Documentation, 2023.
[6] R. B. Mahabaleswarappa, "Modular Integration in Assistive Web Applications," *RYMEC Engineering Review*, vol. 12, no. 3, Bellary, 2024.
[7] N. Sharma, "Tele-MANAS and Digital Mental Health Initiatives in India: A Review," *Journal of Psychosocial Rehabilitation*, vol. 10, issue 2, 2024