PRESIDENCY UNIVERSITY
Private University Estd. in Karnataka State by Act No. 41 of 2013
Itgalpura, Rajankunte, Yelahanka, Bengaluru – 560064

UDYOG SAARTHI (PROGRESSIVE WEB-BASED APPLICATION)

A PROJECT REPORT

Submitted by

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PRESIDENCY SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

BONAFIDE CERTIFICATE

Certified that this report "UDYOG SAARTHI (PROGRESSIVE WEB-BASED APPLICATION)" is a bonafide work of "PRIYANKA G (20221CSE0307), PRIYADARSHINI (20221CSE0306), HANSRAJ (20221CSE0673)", who have successfully carried out the project work and submitted the report for partial fulfilment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE ENGINEERING during 2025-26.

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DECLARATION

We the students of final year B.Tech in COMPUTER SCIENCE ENGINEERING at Presidency University, Bengaluru, named PRIYANKA G, PRIYADARSHINI & HANSRAJ, hereby declare that the project work titled **"Udyog Saarthi (Progressive Web-based Application)** has been independently carried out by us and submitted in partial fulfillment for the award of the degree of B.Tech in COMPUTER SCIENCE ENGINEERING during the academic year of 2025-26. Further, the matter embodied in the project has not been submitted previously by anybody for the award of any Degree or Diploma to any other institution.

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Abstract

Despite the enactment of the Rights of Persons with Disabilities (RPwD) Act, 2016, the promise of dignified employment remains unfulfilled for millions of Persons with Disabilities (PwDs) in India. With an alarming unemployment rate of 64%, systemic barriers such as inaccessible information, low awareness, and the digital divide continue to hinder inclusive workforce participation—particularly in rural and semi-urban regions.

To address this implementation gap, the project introduces **Udyog Saarthi**, a Progressive Web Application (PWA) designed to serve as a digital bridge between policy and practice. Built on modern web technologies and grounded in WCAG/ARIA accessibility standards, the platform comprises two key modules: a job discovery portal that curates employment listings in simplified language and accessible formats, and an employability skills module offering coaching and guidance. Features such as text-to-speech, multilingual support, and low-bandwidth optimization ensure usability across diverse user profiles and connectivity conditions.

The development process of *Udyog Saarthi* was guided by participatory design principles, involving direct input from PwDs, accessibility experts, and grassroots organizations. This ensured that the platform not only meets technical accessibility standards but also resonates with the lived experiences and practical needs of its users. By prioritizing inclusive design from the outset, the project avoids retrofitting accessibility & instead embeds it as a core value.

Beyond its immediate functionality, *Udyog Saarthi* serves as a blueprint for inclusive digital transformation in public service delivery. The platform's success underscores the potential of technology to dismantle structural barriers and foster equity, offering a replicable model for other nations grappling with similar challenges in disability inclusion and employment access.

By aligning with national disability rights frameworks and global accessibility standards, *Udyog Saarthi* reinforces India's commitment to inclusive development and the Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 10 (Reduced Inequalities). The platform not only enhances individual agency among PwDs but also provides policymakers with valuable data insights to monitor employment trends, identify gaps, and refine affirmative action strategies.

The outcome is a holistic, scalable digital ecosystem that empowers PwDs to access employment opportunities, enhance their job readiness, and effectively utilize the job reservation quota. By translating legislative intent into actionable access, **Udyog Saarthi** exemplifies how inclusive technology can catalyze economic empowerment and reshape the landscape of disability-inclusive employment in India.

Keywords: PwDs, Digital Inclusion, Employability, PWA, Accessibility, RPwD Act 2016, India

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Abbreviations

Abbreviation	Expansion
API	Application Programming Interface
ARIA	Accessible Rich Internet Applications
AWS	Amazon Web Services
GCP	Google Cloud Platform
JWT	JSON Web Token
MoSPI	Ministry of Statistics and Programme Implementation
PWA	Progressive Web Application
PwD	Person with Disabilities
RPwD	Rights of Persons with Disabilities
SDG	Sustainable Development Goal
TTS	Text-to-Speech
UI/UX	User Interface/User Experience
WCAG	Web Content Accessibility Guidelines
WHO	World Health Organization

Chapter 1

Introduction

Employment is a key driver of social inclusion and personal dignity, yet for millions of Persons with Disabilities (PwDs) in India, access to meaningful work remains a distant goal. Despite the enactment of the Rights of Persons with Disabilities (RPwD) Act, 2016—which mandates a 4% reservation in government jobs—the employment rate among PwDs remains alarmingly low. According to a recent survey by the Ministry of Statistics and Programme Implementation (MoSPI), nearly 64% of the working-age disabled population is unemployed, highlighting a severe gap between policy and implementation.

The barriers are multifaceted: inaccessible digital platforms, limited awareness of entitlements, bureaucratic hurdles in certification, and a pronounced digital divide in rural and semi-urban regions. Existing job portals such as Naukri and Indeed offer complex interfaces that are not optimized for screen readers or disability-specific filters. Government websites, though intended to disseminate reservation-based opportunities, often suffer from poor accessibility compliance and irregular updates. Meanwhile, disability-focused NGOs provide fragmented support, mostly through offline channels, lacking a centralized digital infrastructure.

To address these challenges, this project proposes *Udyog Saarthi*—a Progressive Web Application (PWA) designed to bridge the gap between policy and practice. The platform aims to provide a centralized, accessible ecosystem for PwDs, combining curated job listings with simplified language, text-to-speech support, and integrated employability modules including coaching, mock tests, and application guidance. By adhering to WCAG/ARIA standards and deploying a low-data usage architecture, *Udyog Saarthi* seeks to empower users across diverse geographies and literacy levels.

1.1 Background

- The fundamental right to dignified employment is a cornerstone of individual empowerment and social inclusion. In India, however, this right remains elusive for millions of Persons with Disabilities (PwDs), who face persistent and multifaceted barriers to accessing gainful employment. Despite the enactment of progressive legislation such as the Rights of Persons with Disabilities (RPwD) Act, 2016—which mandates a 4% reservation in government jobs—the implementation of these provisions remains inconsistent and ineffective across regions [1].
- PwDs encounter challenges including inaccessible digital platforms, fragmented and complex information dissemination, and a pronounced digital divide, particularly in rural and semi-urban areas [2]. These systemic issues not only hinder access to employment opportunities but also contribute to economic dependency and social marginalization. In response to this critical gap, the project titled *Udyog Saarthi* is conceived as a technology-driven solution aimed at creating an accessible, inclusive, and empowering digital platform for PwDs. By leveraging web accessibility standards

and user-centered design, the project seeks to bridge the divide between policy and practice, enabling equitable access to employment resources.

References:

- Report on Persons with Disabilities in India, Ministry of Statistics and Programme Implementation (MoSPI), India (2021).
- Government of India (2016). Enacted the Rights of Persons with Disabilities (RPwD) Act.

1.2 Statistics

- The scale of the employment challenge for Persons with Disabilities (PwDs) in India is both significant and persistent. According to a recent survey conducted by the Ministry of Statistics and Programme Implementation (MoSPI), nearly 64% of the working-age population with disabilities remains unemployed, despite the legal mandate of a 4% reservation in government jobs under the Rights of Persons with Disabilities (RPwD) Act, 2016 [1]. This stark figure underscores a critical implementation gap between policy and practice.
- The barriers contributing to this high unemployment rate are not rooted in a lack of job opportunities, but rather in the inaccessibility of those opportunities. Key factors include limited awareness of the RPwD Act's provisions, attitudinal biases among employers, and bureaucratic complexities in obtaining disability certification [2, 7]. These challenges are further exacerbated in semi-urban and rural regions, where digital literacy and infrastructure remain limited. For instance, regional assessments in Karnataka reveal that PwDs in districts such as Bengaluru Rural and Tumakuru face difficulties accessing online job portals and skill development programs due to poor connectivity and non-inclusive interfaces.
- This data highlights the urgent need for a centralized, accessible digital platform that not only curates job opportunities in simplified formats but also supports employability through integrated coaching and guidance. The Udyog Saarthi project is designed to address this gap by leveraging inclusive technology to transform how PwDs discover and apply for jobs.

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1.3 Prior existing technologies

- Several existing platforms and methods attempt to connect job seekers with employment opportunities, but they fall short in addressing the specific needs of Persons with Disabilities (PwDs). Mainstream job portals such as Naukri and Indeed, while widely used, feature complex and cluttered interfaces that are not optimized for accessibility. These platforms often lack screen reader compatibility, simplified navigation, and filters for disability-specific reservations, making them difficult for PwDs to use effectively [3, 16].
- Government websites, which serve as primary sources for reservation-based job notifications, also present significant challenges. Many suffer from poor user interface and user experience (UI/UX) design, low compliance with accessibility standards, and irregular updates. As a result, PwDs often struggle to access timely and relevant information about job openings and application procedures [3, 7].
- Disability-focused NGOs provide valuable support through career counseling and job placement services. However, their outreach is typically localized and dependent on offline methods such as printed materials, in-person workshops, and telephonic guidance. These efforts lack a centralized digital infrastructure with national coverage and integrated skill-training modules, limiting their scalability and impact [7, 10].
- Overall, the fragmented and inaccessible nature of these existing approaches fails to deliver a comprehensive, end-to-end solution for PwDs seeking employment. This gap underscores the need for a unified, accessible platform like Udyog Saarthi, which integrates job discovery, skill development, and application support within a single digital ecosystem [3, 7, 24].

References:

- [3] Digital Inclusion of PwDs in India, Sharma, A. (2022) in IEEE Access.
- [7] A Study on Challenges Faced by Persons with Disabilities in India in Accessing Employment, Kumar, A., & Singh, P. (2020).
- [10] Web Content Accessibility Guidelines (WCAG) 2.1. W3C Web Accessibility Initiative (WAI). (2018).
- [16] Progressive Web Apps. Google Developers. (2023).
- [24] Annual Report on Disability Affairs, Ministry of Social Justice and Empowerment, Government of India, New Delhi, 2022.

1.4 Proposed approach

Aim of the project:

The primary aim of this project is to enhance the employment prospects of Persons with Disabilities (PwDs) in India by developing Udyog Saarthi, a centralized and accessible Progressive Web Application (PWA) tailored to their unique needs.

Motivation:

Despite the legal safeguards provided by the Rights of Persons with Disabilities (RPwD) Act, 2016, a significant implementation gap persists. PwDs continue to face barriers such as inaccessible digital platforms, fragmented job information, and limited support for skill development. The motivation behind Udyog Saarthi stems from the urgent need to bridge this gap by leveraging inclusive technology to make employment resources truly accessible and actionable.

Proposed Approach:

- The platform will be built around two core modules:

1. Accessible Job Portal – Aggregates and curates job notifications in simplified language and accessible formats, with support for screen readers and text-to-speech (TTS) functionality.
2. Employability Module – Offers coaching content, mock tests, and step-by-step guidance for job applications, tailored to the needs of PwDs.

- The system will adhere to WCAG 2.1 and ARIA standards, ensuring compatibility with assistive technologies. It will also feature multilingual content, low-data usage architecture, and a user-centered design to accommodate diverse literacy and connectivity levels [3, 4, 5].

Applications of the Project:

The platform will serve as a holistic digital ecosystem for PwDs and their guardians, enabling job discovery, skill development, and progress tracking. It will also facilitate awareness of reservation policies and streamline the application process.

Limitations:

- A key limitation is the initial reliance on manually curated job data, which may affect scalability and update frequency. Additionally, the platform's accessibility features will require continuous refinement based on user feedback to ensure inclusivity across different disability profiles

1.5 Objectives

The project's objectives are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART):

- To develop an accessible PWA that provides curated job information tailored for PwDs, featuring simplified language, text-to-speech, and a screen-reader friendly interface [3, 5, 11].
- To enhance the employability of users by integrating coaching modules, mock tests, and guidance on application processes within the platform [7, 24].
- To increase awareness and utilization of the 4% job reservation policy for PwDs by implementing specific filters and dedicated information sections [2, 4, 10].
- To bridge the communication gap by providing a platform for parents/guardians to track opportunities and their ward's progress, addressing literacy barriers [5, 7].
- To ensure wide accessibility by deploying a low-data usage PWA compatible with various devices, especially in semi-urban and rural areas [17, 18, 29].

1.6 SDGs

The Udyog Saarthi project aligns with multiple United Nations Sustainable Development Goals (SDGs), as illustrated in Figure 1.1. Its core objective—to enhance employment accessibility and skill development for Persons with Disabilities (PwDs)—directly supports the following SDGs:

- **SDG 8: Decent Work and Economic Growth**

  By curating accessible job listings and integrating employability modules, the platform promotes inclusive economic participation for PwDs, contributing to sustained, inclusive, and productive employment opportunities [1].

  Reference: [1] Report on Persons with Disabilities in India, Ministry of Statistics and Programme Implementation.
  (2021).

- **SDG 10: Reduced Inequality**

  The project addresses systemic barriers faced by a marginalized community, including digital exclusion, attitudinal bias, and lack of awareness. Through inclusive design and targeted job filters, it empowers PwDs and reduces inequality in access to employment [1].

  Reference: [1] Report on Persons with Disabilities in India, Ministry of Statistics and Programme Implementation.
  (2021).

- **SDG 4: Quality Education**

  The coaching and mock test modules embedded in the platform support lifelong learning and skill enhancement, enabling users to prepare effectively for job applications and interviews [1].

  Reference: [1] Report on Persons with Disabilities in India, Ministry of Statistics and Programme Implementation.
  (2021).

- **SDG 9: Industry, Innovation, and Infrastructure**

  By deploying a low-data usage Progressive Web Application (PWA) compatible with assistive technologies and rural connectivity standards, the project fosters inclusive digital infrastructure and innovation [1].

  Reference: [1] Report on Persons with Disabilities in India, Ministry of Statistics and Programme Implementation.
  (2021).

Fig 1.1 Sustainable development goals [1]

1.7 Overview of project report

Chapter 1 introduces the project **Udyog Saarthi**, highlighting the employment challenges faced by Persons with Disabilities (PwDs), relevant statistics, limitations of existing technologies, the proposed solution, its SMART objectives, and alignment with UN Sustainable Development Goals. Chapter 2 presents a detailed literature review of prior research and technological interventions in the disability employment domain. Chapter 3 outlines the Agile methodology adopted for system development, including iterative planning and feedback cycles. Chapter 4 discusses project management elements such as scheduling, budgeting, and risk mitigation strategies. Chapter 5 covers system analysis and design, including architecture diagrams and module specifications. Chapter 6 elaborates on the hardware and software components used, along with simulation and implementation details. Chapter 7 describes the evaluation framework, performance metrics, and expected outcomes. Chapter 8 explores the social, legal, ethical, sustainability, and safety considerations relevant to the platform. Finally, Chapter 9 concludes the report by summarizing key findings and proposing future enhancements to improve scalability and accessibility.

Chapter 2

Literature review

A comprehensive review of literature was conducted to understand the current landscape of disability employment and digital accessibility in India. This review grounds the Udyog Saarthi project in established research and identifies gaps that the project aims to fill.

The Report on Persons with Disabilities in India by MoSPI (2021) serves as a foundational demographic analysis, quantifying the 64% unemployment rate among working-age PwDs [1]. While excellent at diagnosing the scale of the problem, it is descriptive and does not propose technological solutions, thus justifying the need for an intervention like Udyog Saarthi.

The Rights of Persons with Disabilities (RPwD) Act, 2016 is the core operational framework for this project [2]. The literature reveals a significant gap between the policy's intent (4% job reservation) and its implementation, characterized by low awareness and bureaucratic delays. Udyog Saarthi is designed as a practical tool to bridge this implementation gap.

Sharma, A. (2022) provides a rigorous technical audit of digital platforms in India, confirming their severe inaccessibility against WCAG standards [3]. This work justifies Udyog Saarthi's foundational commitment to baking accessibility standards into its design from the outset, directly addressing the failures documented by Sharma.

Gupta, S., & Kumar, P. (2021) explore UI/UX strategies for creating empowering experiences for PwDs, advocating for Universal Design principles over a mere checklist approach to accessibility [4]. This paper heavily influenced Udyog Saarthi's design philosophy, moving the goal from just being "accessible" to being "effortlessly usable."

The Screen Reader User Survey #9 by Lazar, J., & WebAIM (2021) offers empirical data on the most common barriers faced by screen reader users, such as complex forms and poor page structure [5]. This survey directly informed the design of specific features in Udyog Saarthi, such as using semantic HTML and simplifying the application flow.

Darcy, S., & Taylor, T. (2009) provide a theoretical framework by introducing the concept of "digital capital," framing accessibility as a matter of civil rights and citizenship [6]. This work positions Udyog Saarthi as more than a tool—it is an instrument of digital citizenship that aims to convert digital access into tangible social and economic participation.

Kumar, A., & Singh, P. (2020) offer a ground-level analysis of employment challenges for PwDs in India, identifying hurdles like lack of centralized information and bureaucratic complexities [7]. This research directly validates the core functionalities of Udyog Saarthi, whose design addresses each identified hurdle.

The World Health Organization's (WHO) Global Report on Disability (2019) promotes a social model of disability, focusing on societal barriers rather than impairments [8]. Udyog

Saarthi embodies this model by seeking to "fix" the digital employment ecosystem, not the individual.

Bühler, C., & Heck, H. (2001) presented a visionary argument for using digital technology to promote autonomy for PwDs [9]. Udyog Saarthi can be seen as a contemporary realization of their vision, using modern PWA technology for empowerment.

Finally, the advocacy work of the National Centre for Promotion of Employment for Disabled People (NCPEDP) consistently highlights the implementation gaps in job reservations [10]. Udyog Saarthi operationalizes this advocacy by demystifying the reservation system and guiding users through applications.

Summary of Literatures reviewed

A summary of the literature reviewed is presented in Table 2.1.

Table 2.1 Summary of Literature reviews

S #	Article Title, Published year, Journal name	Methods	Key Features	Merits	Demerits
1.	Report on Persons with Disabilities in India, 2021, Ministry of Statistics and Programme Implementation (MoSPI)	Descriptive Statistical Analysis	Comprehensive demographic and socio-economic analysis quantifying the status of PwDs in India, including employment trends.	Provides foundational, empirical evidence of the 64% unemployment rate, justifying the need for intervention.	Does not investigate root causes in depth or propose concrete technological solutions; remains a diagnostic exercise.
2.	Rights of Persons with Disabilities (RPwD) Act, 2016, Government of India	Legislative Framework Analysis	Landmark civil rights legislation mandating 4% job reservation and promoting inclusion for 21 disability conditions.	Provides a robust legal framework and the core operational basis for the project's objectives.	Significant gap between policy intent and practical implementation due to lack of awareness and support mechanisms.
3.	Digital Inclusion of PwDs in India, 2022, IEEE Access	Technological Accessibility Audit (WCAG 2.1)	Rigorous evaluation of Indian digital platforms, identifying common failures like lack of screen reader compatibility.	Provides data-driven, technical justification for the project's foundational commitment to accessibility standards.	Significant gap between policy intent and practical implementation due to lack of awareness and support mechanisms.
4.	Inclusive Employment Platforms for Persons with	UI/UX Design Analysis (Universal Design)	Explores principles for creating intuitive, low-friction user experiences that cater to diverse	Informs the project's user-centered design philosophy, aiming for "effortless	The theoretical framework requires practical validation through real-world

	Disabilities, 2021, Springer		needs and preferences.	usability" beyond basic accessibility.	implementation and user testing.
5.	Screen Reader User Survey #9, 2021, WebAIM	Empirical User Survey	Large-scale survey collecting data on browsing habits, preferences, and common barriers from screen reader users.	Provides empirical evidence that directly justifies specific feature designs, like semantic HTML and simplified forms.	As a global survey, findings are not specific to the Indian context or job portals, though core barriers are universal.
6.	Disability citizenship and digital capital, 2009, Darcy & Taylor	Socio-Digital Theoretical Analysis	Introduces "digital capital" concept, framing accessibility as a matter of civil rights and social inclusion.	Provides a theoretical foundation, positioning the app as an instrument of digital citizenship and empowerment.	Stronger in theoretical framework than in providing specific technical or design specifications.
7.	A Study on Challenges Faced by Persons with Disabilities in India in Accessing Employment, 2020, Journal of Social Inclusion Studies	Mixed-Methods (Qualitative/ Quantitative)	Ground-level analysis identifying structural, informational, and attitudinal barriers to employment for PwDs.	Directly validates the core functionalities of the platform (curated info, training) by addressing identified hurdles.	Stops short of proposing detailed technological solutions to the challenges it uncovers.
8.	Global Report on Disability, 2019, World Health Organization (WHO)	Evidence Synthesis & Policy Analysis	Advocates for a social model of disability, focusing on societal barriers rather than individual impairments.	Guides the project's core philosophy of "fixing" the digital ecosystem instead of the individual.	The global scope means recommendations require adaptation to the specific Indian context.
9.	Empowerment by Digital Media of People with Disabilities, 2001, ICCHP	Visionary Technology Analysis	Early exploration of how digital technologies can promote autonomy, self-representation, and advocacy for PwDs.	Provides a historical vision that aligns with the project's goal of using modern PWA technology for empowerment.	The specific technologies discussed are now dated, though the core philosophy remains relevant.
10	Advocacy Materials, n.d., National Centre for Promotion of Employment for Disabled People (NCPEDP)	Fieldwork & Policy Advocacy	Highlights implementation gaps in job reservations through extensive fieldwork and stakeholder consultations.	Offers real-world, grassroots insights into why reservations go unclaimed, informing the app's practical features.	Materials are based on advocacy and analysis rather than primary academic research methodologies.

Chapter 3

Methodology

The Udyog Saarthi project is developed using the Agile methodology, specifically the Scrum framework. This iterative and incremental approach is ideal for accessibility-focused software development, where continuous user feedback and adaptability are essential. The user-centered nature of this project—designed for Persons with Disabilities (PwDs)—requires active involvement of end-users in the design and validation loop, aligning perfectly with Agile's principles of collaboration, responsiveness, and incremental delivery [12].

Agile Scrum Framework

As illustrated in Figure 3.1, the Scrum framework organizes development into time-boxed iterations called sprints, typically lasting 2–3 weeks. Each sprint begins with a planning session, followed by design, implementation, testing, and review. The process is cyclical, ensuring continuous refinement and delivery of working software increments.

The diagram shows the core components of Scrum:

- **Product Backlog** – A prioritized list of features and tasks.
- **Sprint** – The central iterative cycle.
- **Daily Scrum** – Short daily meetings to track progress.
- **Sprint Review** – Evaluation of completed work.
- **Sprint Retrospective** – Reflection and process improvement.
- **Increment** – The potentially shippable product output.

This structure supports rapid development, frequent validation, and adaptive planning.

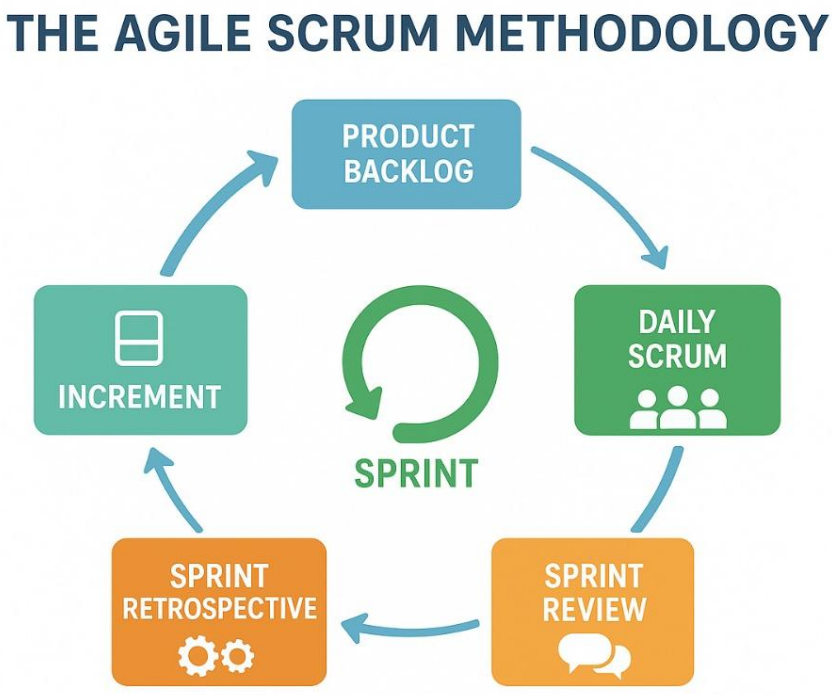

Figure 3.1: The Agile Scrum Methodology [12]

Project Stages Mapped to Agile Scrum

The development lifecycle of Udyog Saarthi is mapped to Agile stages as follows:

- **Requirements Specification & Literature Review (Sprint 0):** Conducted a comprehensive literature survey (Chapter 2) and defined high-level requirements and SMART objectives (Chapter 1).
- **Sprint Planning:** For each sprint, the team selects features from the product backlog (e.g., "User registration module," "TTS API integration") for implementation.
- **System & Unit Design:** Created UI mockups, database schema, and API specifications for each sprint module. Design decisions are guided by WCAG/ARIA standards.
- **Implementation (Coding):** Developed features using the selected tech stack: React.js for frontend, Node.js for backend, and MongoDB for data storage.
- **Unit Testing:** Executed component-level tests to validate isolated functionality using open-source testing tools.
- **Integration Testing:** Performed system-level testing to ensure new modules integrate seamlessly with existing components.
- **Sprint Review & Validation:** Demonstrated working software to stakeholders (including PwDs) and collected feedback. This feedback loop ensures the platform meets real-world accessibility needs.
- **Sprint Retrospective:** The team reflects on sprint outcomes to identify process improvements for the next cycle.

This cycle repeats until all core features—such as accessible job listings, coaching modules, and guardian dashboards—are implemented and validated. Agile ensures continuous verification (via testing) and ongoing validation (via user feedback), making it ideal for inclusive, accessibility-driven platforms.

FUTURE WORK

While the Agile Scrum framework has enabled iterative development and user-centered design for Udyog Saarthi, several enhancements are planned for future phases:

- AI-Based Job Matching: Integrate machine learning models to recommend jobs based on user profiles, skill assessments, and historical application data.
- Voice-Activated Navigation: Expand accessibility by enabling voice commands for users with motor impairments or low literacy.
- Guardian Analytics Dashboard: Develop advanced analytics for guardians to monitor progress, engagement, and skill development of their wards.
- Offline Mode Support: Implement service workers and local caching to allow partial functionality in low-connectivity environments.
- Multilingual Expansion: Extend support to regional languages beyond Hindi and English, improving inclusivity across linguistic demographics.

These enhancements will be prioritized based on user feedback and resource availability in subsequent development cycles.

CONCLUSION

The Agile Scrum methodology has proven to be a robust and flexible framework for developing Udyog Saarthi, an inclusive employment platform for Persons with Disabilities. Its iterative nature allowed for continuous validation, stakeholder engagement, and adaptive planning—critical for accessibility-focused software. By mapping each sprint to specific deliverables and incorporating real-time feedback, the project ensured both technical correctness and user relevance. The methodology also supported modular development, enabling future scalability and integration of advanced features. Overall, Agile Scrum was instrumental in aligning the project's goals with its execution strategy.

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12. Figure 3.1: The Agile Scrum Methodology. Created using Draw.io based on Scrum Guide [2].