Udyog Saarthi App - (Progressive Web-based Application) for Adults undergoing Job coaching for opportunities under 4% reservation in NIEPMD and other Institutions

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Abstract—Finding a job when you have a disability often feels like trying to climb a mountain without the right gear. Even though the government has created a 4% job reservation for persons with disabilities, the reality is that most job portals are not built with their needs in mind. Many people with disabilities struggle with complex online systems, cannot find disability-friendly jobs, or simply do not know about available opportunities.

The Udyog Saarthi App changes this by creating a job portal that actually understands and addresses these challenges. It is like having a personal assistant that works as you need it. Users can create profiles that highlight their abilities rather than their disabilities, find jobs that match their specific needs, and apply with confidence. Employers get to connect with talented candidates that they might otherwise miss.

What makes it really special is that it works on any device, functions even when you are offline, and feels natural to use whether you are tech-savvy or just starting out with digital platforms. We are not just building another app; we are building bridges to employment, dignity, and financial independence for people who deserve equal opportunities.

Index Terms—Persons with Disabilities, Job Reservation, Accessible Technology, Employment Platform, Inclusive Design, Web Application, PWA

I. INTRODUCTION: WHY WE BUILT UDYOG SAARTHI

Imagine having the skills and willingness to work, but every door seems closed due to barriers you cannot control. This is the daily reality for millions of people with disabilities in India. The government recognized this challenge and created the Rights of People with Disabilities Act in 2016, setting aside 4% of jobs to support people with disabilities. But here is the surprising truth: despite this good intention, nearly two-thirds of qualified individuals still cannot find employment.

Why does this happen? The problem isn't a lack of jobs or skills - it is a gap in the system. Most job portals are like buildings without ramps or elevators. They work fine for some people but completely exclude others. They don't have features for screen readers, they are too complicated for people new to technology, and they don't help employers find the amazing talent within the disability community.

The Udyog Saarthi App is our answer to this problem. We have created a platform that feels like it was designed by people who actually understand the challenges of finding employment with a disability. It is simple, it is accessible, and it treats every user with the dignity they deserve.
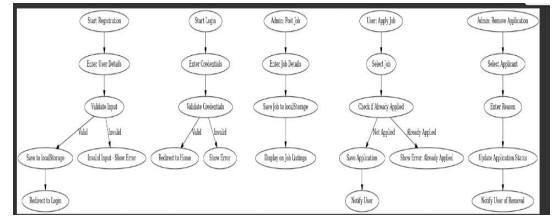
II. SYSTEM ARCHITECTURE OVERVIEW

Fig. 1. Udyog Saarthi App System Architecture

The Udyog Saarthi App is designed using a three-tier architecture to ensure accessibility, reliability, and smooth performance:

User Layer: Includes Job Seekers (People with Disabilities) and Administrators (Employers). Job seekers can register, log in, view job listings, and apply, while administrators can post jobs, review applications, and provide feedback.

Application Layer: Handles all major operations like authentication, job management, notifications, and data flow between users and the system.

Data Layer: Stores user profiles, job postings, and application details locally, with potential integration to cloud storage for large-scale data.

III. UNDERSTANDING THE LANDSCAPE

When we started this project, we looked at what already exists in the job market. The numbers tell a concerning story: according to government statistics, about 64% of people with disabilities in India are unemployed. That is nearly two out of every three qualified individuals who want to work but cannot find opportunities.

Current job platforms like Naukri.com and government portals serve general audiences well, but these platforms lack crucial elements for inclusive support for people with disabilities. They are like restaurants that serve great food but

have no wheelchair accessible entry - the service is there, but not everyone can use it.

Some newer platforms are trying to address this using artificial intelligence, but they often feel technical and impersonal. What is missing is a human-centered approach that combines job searching for job opportunities with support, guidance, and understanding.

IV. THE HEART OF THE PROBLEM

Through our research, we identified several key barriers that keep qualified people with disabilities from finding employment:

A. The Awareness Gap

Many individuals and their families simply don't know about the job opportunities available to them. It is like having a library full of books but no one knows how to find the one they need.

B. The Accessibility Barrier

Most job portals aren't designed with disabilities in mind. They might work fine if you can see perfectly and use a mouse easily, but what about someone who uses a screen reader or has limited hand mobility?

C. The Complexity Challenge

Many people with disabilities did not grow up with modern technology, and complex online systems can feel intimidating. We heard stories of people giving up on job applications because the process was just too confusing.

D. The Feedback Void

When applications are rejected, people rarely know why. This lack of feedback makes it impossible to improve and try again with better chances.

V. OUR SOLUTION: HOW UDYOG SAARTHI WORKS

We designed Udyog Saarthi around one simple idea: finding a job should be straightforward and dignified for everyone. Here is how we make that happen:

A. For Job Seekers: Your Personal Employment Assistant

Think of Udyog Saarthi as your helpful companion in the job search journey:

Getting Started is Simple: Register once with your details and disability category. The process feels natural, not like filling out government forms.

Find the Right Fit: Browse jobs that actually match your abilities and needs. The system helps you find opportunities where you can truly shine.

Apply with Confidence: Submit applications with just a few clicks. No complicated processes, no confusing steps.

Track Your Progress: See exactly where each application stands and get helpful feedback if things don't work out.

B. For Employers: Finding Hidden Talent

For companies and organizations, Udyog Saarthi opens doors to amazing talent they might otherwise miss:

Post Job Opportunities Effortlessly: Share job openings that reach qualified candidates specifically looking for inclusive employers.

Review Applications Thoughtfully: See candidates' profiles and skills in a format designed for fair evaluation.

Provide Meaningful Feedback: Help candidates grow by sharing constructive comments on their applications.

C. The Technology Behind the Magic

We built Udyog Saarthi using modern web technologies that make it accessible to everyone:

Works Everywhere: As a Progressive Web App, it functions beautifully on phones, tablets, or computers. No app store downloads required.

Never Left Stranded: Even without internet connection, you can access previously loaded pages and prepare applications.

Grows With You: The system starts simple but can expand to handle thousands of users and opportunities.

VI. BUILDING THE SYSTEM: OUR TECHNICAL APPROACH

A. How It's Structured

We organized Udyog Saarthi into three clear layers that work together seamlessly:

The Interface Layer: This is what users see and interact with - clean, simple screens with clear navigation and readable text that works well with assistive technologies.

The Brain of the Operation: This layer handles all the important tasks like user registrations, job matching, and communication between users and employers.

The Memory Bank: This is where all the information lives- user profiles, job listings, and application details, stored securely and efficiently.

B. Key Features That Make a Difference

- **Smart Registration:** Create profiles that highlight your abilities and preferences
- **Intelligent Job Matching:** Find opportunities that fit your skills and accessibility needs
- **Transparent Tracking:** Follow each application from submission to outcome
- **Helpful Feedback System:** Learn and improve from each application experience
- **Learning Resources:** Access training and skill-building opportunities
- **Always Accessible:** Designed from the ground up for all ability levels

VII. MAKING IT HAPPEN: IMPLEMENTATION JOURNEY

Building Udyog Saarthi has been both challenging and incredibly rewarding. We started with a working prototype that demonstrates all the key features:

Real People, Real Results: Our testing shows that users find the platform intuitive and empowering. One tester told us, "This feels like it was made for someone like me."

Technical Foundation: We used HTML, CSS, and JavaScript to create a foundation that is both powerful and flexible. The system handles user profiles, job applications, and employer interactions smoothly.

Accessibility First: Every design decision was tested for accessibility. Large buttons, clear contrasts, keyboard navigation - we thought about how different people would interact with the platform.

VIII. Challenges We Faced and How We Overcame Them

A. Bringing Everyone On Board

Getting different organizations to adopt new technology is always challenging. Our approach is to make the benefits so clear that adoption becomes the obvious choice. We are working with disability organizations to spread the word and show how Udyog Saarthi makes their work easier.

B. Keeping Information Safe

When dealing with personal information, security is non-negotiable. We have built strong protections into the system and will continue to enhance them as we grow.

C. Bridging the Digital Divide

Many users aren't comfortable with technology. We have addressed this by making everything incredibly intuitive and providing multiple ways to get help when needed.

D. Changing Mindsets

Some employers still have outdated ideas about what people with disabilities can achieve. We are addressing this by highlighting success stories and showing the amazing talent available through our platform.

IX. The Difference We're Making

Udyog Saarthi is more than just a software project - it is about changing lives and creating opportunities. Here is what we are achieving:

Creating Real Opportunities: Connecting qualified people with employers who value their skills.

Building Confidence: Helping people see that their disabilities do not define their abilities.

Promoting Inclusion: Showing companies the business value of diverse, inclusive workplaces.

Supporting Independence: Enabling financial independence and self-reliance.

X. Looking Ahead: Our Vision for the Future

What we have built is only the beginning. We see Udyog Saarthi growing into a comprehensive support system that includes:

Smarter Job Matching: Using AI to suggest opportunities that perfectly match each individual's skills and preferences.

Voice Guidance: Assisting users navigate the platform through voice commands and responses.

Skill Development: Integrating training programs and resume-building tools.

Expanded Partnerships: Working with more companies, government agencies, and disability organizations.

Community Building: Creating spaces where users can share experiences and support each other.

XI. Conclusion: More Than an App - A Movement

Udyog Saarthi represents a fundamental shift in how we think about employment and disability. It is not about creating special privileges- instead, it focuses on building equal opportunity. It is about recognizing that talent comes in many forms, and everyone deserves the opportunity to build a meaningful career.

The platform we have built demonstrates how effectively with thoughtful design and genuine understanding, technology can break down barriers that have existed for generations. We are not just connecting job seekers with employers-we are building a more inclusive society where everyone has the opportunity to contribute, grow, and succeed.

As one of our early users told us, "For the first time, I feel like someone actually designed a system with people like me in mind." That is what drives us forward the knowledge that we are not just building software, we are building hope, opportunity, and dignity.

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