Skill Connect: A Unified Digital Platform for Local Services, Inclusive Employment, and Innovation Collaboration

Ruby Angel T G
Assistant Professor
Department of Information Technology
Sathyabama Institute of Science and Technology
Chennai, India
rubyangel.t.g.it@sathyabama.ac.in

Varun Kumar S
UG Student
Department of Information Technology
Sathyabama Institute of Science and Technology
Chennai, India
varunkumars.vk20@gmail.com

Barath Raj B
UG Student
Department of Information Technology,
Sathyabama Institute of Science and Technology
Chennai, India
braj83018@gmail.com

Sachin S
UG Student
Department of Information Technology
Sathyabama Institute of Science and Technology
Chennai, India
sachins272115@gmail.com

Thilak R
UG Student
Department of Information Technology
Sathyabama Institute of Science and Technology
Chennai, India
t hilakraghu2004@gmail.com

Kesava Rao KB
UG Student
Department of Information Technology
Sathyabama Institute of Science and Technology
Chennai, India
kesavaredeem@gmail.com

***Abstract*—In today's world, many people still find it hard to connect with the right opportunities. When someone moves to a new place, they often struggle to find nearby workers like electricians or plumbers, even though skilled workers are available but not visible. At the same time, many disabled people face problems in doing offline jobs, even if they have good skills. Also, students and young innovators have ideas, but they do not know where to present them or who will support them.**

This project introduces Skill Connect, a simple mobile application that brings all these things into one place. It helps people find local workers, gives remote job options for disabled users, and allows students to share ideas with industries. The app is designed in a way that is easy to use and open for everyone. Overall, it tries to reduce the gap between people, skills, and opportunities in a practical way.

I. INTRODUCTION

In today's world, technology is everywhere. People use mobile apps for almost everything, from ordering food to booking services. Still, some basic problems are not solved properly. One common issue is finding local workers. When someone moves to a new place, they often do not know any nearby electricians, plumbers, or helpers. Even if skilled workers are available, they are not visible to people who need them. This creates a gap where work exists, but connection does not happen.[1]

At the same time, many small-scale workers depend only on local contacts or word of mouth. Because of this, they miss many chances to get work. They may have good skills, but without proper reach, they stay unnoticed. This problem becomes more serious in cities where people do not know their neighbors well.[2]

Another important challenge is faced by disabled individuals. Many of them have strong skills and are capable of doing jobs like data entry, content work, or design. But working outside is not always easy for them. Travel, physical barriers, and lack of support systems make it difficult. Even though online jobs exist, they are not always easy to access or understand. Some platforms are too complex, and others are not designed with accessibility in mind. Because of this, many skilled individuals are left without proper opportunities.[3]

There is also a different kind of problem that is often ignored. Students and young innovators come up with many useful ideas. Some ideas can solve real-world problems or improve existing systems. But most of the time, they do not know where to present their ideas. They do not have a direct way to reach industries, companies, or investors. As a result, many ideas remain only as projects and never move forward.[4]

People need opportunities, workers need visibility, and innovators need support. But these things are spread across different platforms or sometimes not available at all. There is no single system that brings all of them together in a simple and useful way.[5]

This is where Skill Connect comes in. It is designed as a single platform that connects people, workers, and innovators. Users can find nearby workers based on their needs. Workers can create profiles and show their skills to a wider audience. Disabled individuals can access job opportunities that match their skills and can be done from home. Students and innovators can share their ideas and connect with industries for guidance or collaboration.[6]

The goal of this system is not to make things complicated, but to make them easier. It focuses on solving real problems in a practical way. Skill Connect tries to reduce the gap between people, skills, and opportunities, and create a system where everyone gets a fair chance to grow.[7]

II. LITERATURE REVIEW

[1] Many digital platforms today try to connect people with work and services. Some focus on freelancing, some on local services, and a few try to support people with special needs. But when we look closely, most of these systems solve only one part of the problem.

[2] They do not bring everything together in one place. This section looks at different types of platforms and what they do well, and also where they fall short.

[3] Freelancing platforms have grown a lot in recent years. Websites like Upwork and Fiverr allow people to work online and earn money based on their skills. These platforms connect freelancers with clients from different parts of the world. Users can create profiles, list their skills, and apply for jobs. This has helped many people find remote work, especially in areas like writing, design, and programming.

[4] However, these platforms are mostly global and competitive. Beginners often find it hard to get their first job because there are many experienced users already. Also, these platforms are not designed in a very simple way for everyone. For disabled individuals, the interface and process can sometimes feel complex. There is also less focus on accessibility features like voice support or simplified navigation. So even though opportunities exist, not everyone can use them easily.

[5] On the other side, there are platforms that focus on local services. Apps like Urban Company help users find workers such as electricians, cleaners, and repair technicians. These platforms provide location-based services and allow users to book workers easily. They also include ratings and reviews, which helps build trust between users and workers.

[6] Even though such platforms solve the problem of finding local services, they are limited in scope. Only registered professionals who meet certain standards can join. Many small-scale or independent workers are not part of these platforms. Because of this, a large number of skilled workers still remain unknown. Also, these platforms mainly focus on services and do not provide job opportunities for people who want to work remotely.

[7] There are also job portals like Naukri.com that help users find employment. These platforms are useful for full-time jobs and internships. Users can upload resumes and apply for positions in different companies. While they are helpful for general employment, they do not support flexible or skill-based short work in a simple way. They also do not focus much on accessibility for disabled users.

[8] In recent years, there has been some research and development in assistive technology. These systems aim to help disabled individuals use digital platforms more easily. Features like screen readers, voice commands, and adaptive interfaces have been introduced. Some applications are built specially for accessibility, but they are often limited to specific tasks like communication or education. They do not fully support employment or income generation in a practical way.

[9] Another important area is innovation platforms. Websites like AngelList and LinkedIn allow people to connect with professionals and companies. These platforms help users share ideas, find jobs, or build networks. Students and startups can use them to reach a larger audience.

[10] But these platforms are not always easy for beginners. Many students do not know how to present their ideas properly or whom to contact. There is no structured way for industries to directly review or respond to student ideas. Because of this, many creative ideas do not get the attention they deserve.

[11] Some research papers also discuss smart platforms that combine multiple services. These systems try to integrate job search, service booking, and user interaction into one application. While this idea is useful, most of these systems are still at a basic level or not fully implemented in real-world scenarios. They often lack proper scalability, user-friendly design, or real-time features.

[12] From all these studies and existing platforms, one clear observation can be made. Each system focuses on solving a single problem. Freelancing platforms focus on remote work. Local service apps focus on nearby workers. Job portals focus on employment. Networking platforms focus on connections. But there is no single system that connects all these aspects together in a simple and accessible way.

[13] Another major gap is inclusivity. Many platforms do not fully consider the needs of disabled individuals. Accessibility is often added as an extra feature, not as a core design element. This makes it harder for such users to fully benefit from the platform.

[14] Also, small-scale workers and beginners are often left behind. Platforms either focus on highly skilled professionals or verified service providers. This creates a gap where many capable individuals do not get enough opportunities.

[15] Based on this understanding, there is a need for a unified platform that brings together local services, remote job opportunities, and innovation support. The system should be simple, easy to use, and accessible for everyone. It should not only connect users but also create equal opportunities for workers, disabled individuals, and innovators.

[16] Skill Connect is designed with this idea in mind. It tries to combine the strengths of existing systems while reducing their limitations. By integrating multiple features into one platform, it aims to provide a more complete and practical solution for real-world problems.

III. METHODOLOGY

A. Proposed Architecture

The Skill Connect system is designed as a simple and modular architecture so that it can handle different types of users and services without confusion. The main idea is to bring three major parts into one system: local services, remote jobs, and innovation sharing. Instead of building separate apps for each, everything is connected in a single platform.

The system is divided into different layers such as user interface, backend services, database, and external integrations. Each layer has its own role, but all of them work together smoothly. The mobile or web app acts as the front layer where users interact. The backend manages logic, user data, and communication. The database stores all important details like user profiles, job listings, and service requests.

The architecture is designed in a way that new features can be added later without affecting the existing system. This makes the platform scalable and easy to maintain.

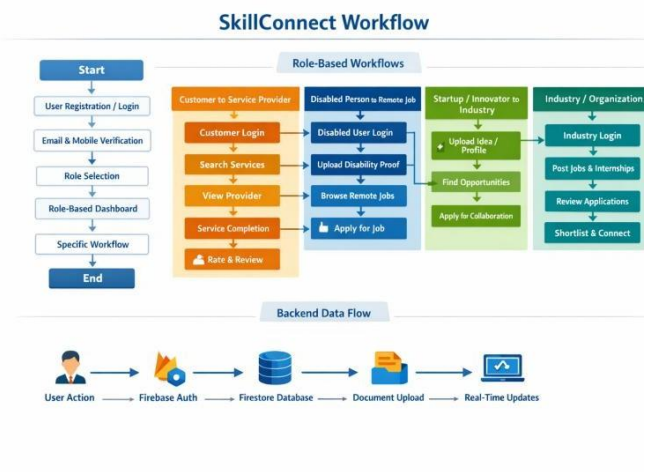

Fig 3.1. Architecture Diagram.

B. Registration and Role Management

The first step in the system is user registration. Every user creates an account using basic details such as name, email, phone number, and password. After registration, the user selects a role based on their purpose.

There are mainly five roles in the system:

i. Customer (looking for workers)
ii. Service Provider (offering services)
iii. Disabled User (looking for remote jobs)
iv. Innovator or Student (sharing ideas)
v. Industry or Company (posting jobs and reviewing ideas)

Once the role is selected, the system provides a dashboard based on that role. This makes the app simple because users only see what they need.

C. Local Service Matching Module

This module is used to connect users with nearby workers. When a customer searches for a service, the system uses location-based filtering to display relevant workers.
Service providers can create profiles where they list their skills, experience, and type of services. They can also update availability and pricing. When a user enters a request, the system matches it with nearby providers.

The working process is as follows:

1. User selects the required service
2. System identifies user location
3. Nearby workers are displayed
4. User selects and contacts the worker

Ratings and reviews are also included to improve reliability. This module helps small-scale workers become more visible and increases their chances of getting work.

D. Remote Job Module for Disabled Users

This module focuses on providing job opportunities for disabled individuals. The system allows users to create a skill profile where they mention their abilities such as typing, designing, or other online work. Companies or industries can post jobs that match these skills. The system then suggests suitable jobs to users based on their profile.

The process works as follows:

1. User creates skill profile
2. Company posts job requirements
3. System matches skills with jobs
4. User applies for the job
5. Company reviews and selects candidates

The interface is designed to be simple and easy to understand. This module helps disabled users work from home and earn income without facing physical barriers.

E. Innovation and Collaboration Module

This module helps students and innovators share their ideas with industries. Users can upload their ideas in a structured format, including title, description, and problem statement.
Industries or companies can view these ideas and respond if they are interested. This creates opportunities for collaboration, internships, or further development.

The process is simple:

1. Innovator uploads idea
2. Industry reviews ideas
3. Feedback or interest is provided
4. Collaboration is initiated

This module helps ideas move beyond academic projects and reach real-world applications.

F. Communication Module

Communication is an important part of the system. Once users are connected, they need a way to interact. The system includes a messaging feature that allows users to communicate directly. Customers can talk to service providers, job applicants can contact companies, and innovators can discuss ideas with industries. This improves clarity and reduces confusion during the process.

G. Database Management

The system uses a cloud-based database to store all data. This includes user profiles, job listings, service details, applications, and transactions.

Data is organized into different sections for easy access:

- User data
- Services
- Jobs
- Applications
- Ideas
- Payments

Efficient data storage helps in faster performance and smooth functioning of the system.

H. *Security and Authentication*

Security is an important part of the system. User data is protected using authentication and encryption methods. Users can log in using email or mobile verification. Access control ensures that users can only view or edit their own data. This helps in maintaining privacy and system reliability.

I. *System Workflow*

The overall workflow of the system is simple and user-friendly:

1. User registers and selects role
2. User accesses dashboard
3. User performs actions based on role
4. System processes request
5. Matching or response is generated
6. Communication and transaction take place
7. Feedback is collected

This workflow ensures smooth operation from start to end.

IV. RESULTS AND DISCUSSION

A. *Functional Performance*

The Skill Connect application was developed and tested as a working prototype. The system includes three main features: local worker connection, remote job support for disabled users, and an innovation sharing platform. During testing, users were able to register and select roles such as customer, worker, disabled user, innovator, and industry. Each role was provided with a separate dashboard. The navigation was simple, and users were able to complete tasks without confusion. The local service feature allowed users to search and view nearby workers. Workers were able to create profiles and display their skills. This helped improve visibility for small-scale workers. The job module allowed disabled users to view available jobs and apply based on their skills. The system ensured that the process remained simple and accessible.The innovation module allowed students to upload ideas and descriptions. These ideas could be viewed by industries, creating a connection between students and companies.

B. *System Output and Interface*

The application screens were designed in a simple format so that users can easily understand the features.

Users were able to:

- Register and login
- Select their role
- Access role-based features
- Perform actions like booking services, applying for jobs, or uploading ideas

The interface showed smooth transitions between screens and proper data display.

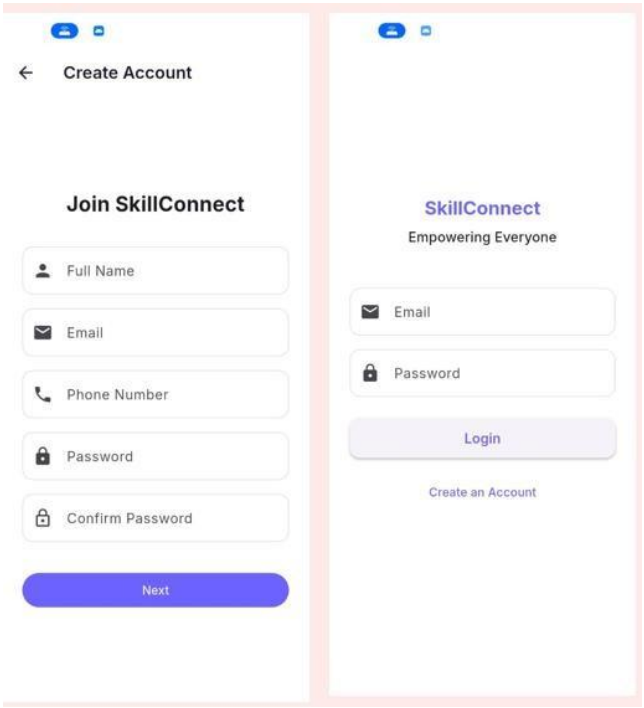

Fig 4.1: User Dashboard

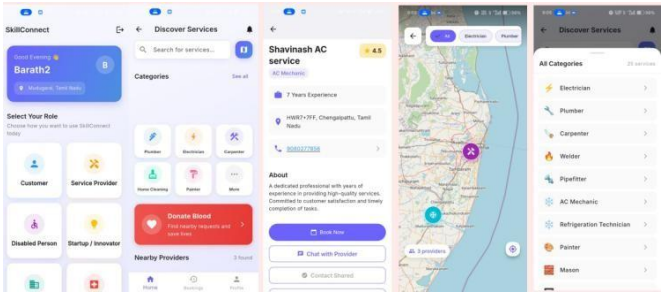

Fig 4.2: Service Search / Worker Listing Screen

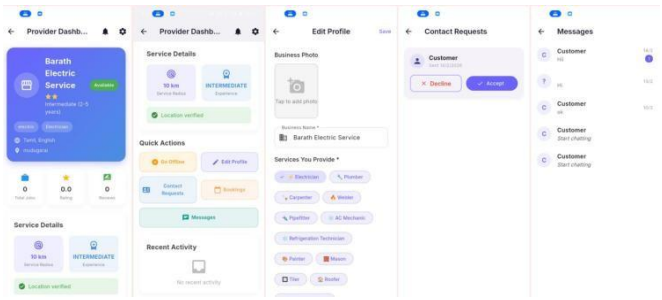

Fig 4.3: Job Application / Disabled User Module

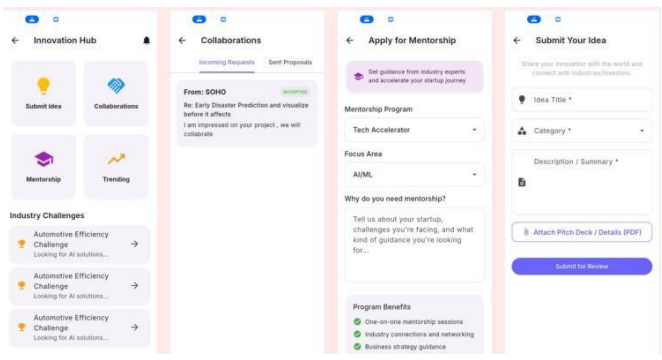

Fig 4.4: Innovation Idea Submission Screen

C. *Performance Observation*

The system performance was observed under normal usage conditions.

- The application responded quickly during navigation
- Data loading time was minimal
- Matching between users and workers worked correctly
- Job suggestions were displayed properly based on skills

Even when multiple users interacted with the system, it continued to function without major issues.

D. *Discussion*

From the results, it is clear that the Skill Connect platform successfully solves the problems identified earlier.
First, it reduces the difficulty of finding local workers. Users can directly view available workers instead of depending on personal contacts.

Second, it provides a working solution for disabled individuals by giving them access to remote job opportunities. This improves inclusivity.

Third, it creates a new space for students and innovators to share ideas and connect with industries. This helps in turning ideas into real opportunities.

Unlike existing platforms, this system combines all these features into one application, making it more practical and useful.

E. *Limitations*

Some limitations were observed during testing:

- The system currently supports a limited number of users
- Real-time location accuracy can be improved
- Payment system integration is basic
- Industry response depends on external users

F. *Future Improvements*

Based on the results, the system can be improved by adding:

- AI-based job and service recommendations
- Voice support for accessibility
- Multi-language interface
- Advanced verification and security
- Integration with real-time maps

V. CONCLUSION

The proposed Skill Connect system presents a simple and practical solution to solve multiple real-world problems related to services, employment, and innovation. The platform brings together local service discovery, remote job opportunities for disabled individuals, and an idea-sharing system into a single application. This combined approach helps reduce the gap between people, skills, and opportunities. The system allows users to easily find nearby workers, while also giving small-scale service providers better visibility. At the same time, it supports disabled individuals by providing access to skill-based online jobs, helping them work without facing physical challenges. In addition, the innovation module creates a useful space where students can share their ideas and connect with industries for support and collaboration. The results show that the system works effectively under normal conditions and provides a smooth user experience. The role-based design makes the platform easy to understand and use. Compared to existing platforms that focus on only one area, this system provides a more complete and useful solution. Although the current system is developed as a prototype, there are still areas for improvement. Future work can include adding AI-based recommendations, improving security, supporting multiple languages, and integrating real-time features such as maps and advanced payment systems.

In conclusion, Skill Connect is a step towards building a more inclusive and connected digital environment. It not only helps people find work and services but also supports innovation and equal opportunity, making it a valuable solution for real-world applications.

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