

Content-Sharing Portfolio Platform

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Abstract—The Local Skill Hub is a web-based platform that connects individuals seeking to provide their skill-based services to local potential clients. With a Local Skill Hub, users can easily post their skills, learn about opportunities in their community, and connect directly with clients in their local area. The goal of the Local Skill Hub is to foster local employment by facilitating the matching of job seekers and employers based on their abilities, while also providing access for users to connect to trusted service providers. The Local Skill Hub promotes self-employment and reduces reliance on external job sources, thereby positively impacting the local economy. The Local Skill Hub will have a simple and accessible user interface that will ensure that any individual with basic computer knowledge will benefit from the Local Skill Hub. Overall, the Local Skill Hub's mission is to provide increased access, improved communication, and increased efficiency of the overall ecosystem for skills-based services.

Index Terms— Local Skill Hub, Job Matching, Skill-Based Services, Web Platform, Local Employment, Service Marketplace.

I. INTRODUCTION

As the digital world continues to expand globally, the growth of skill employment and service platforms is becoming more prevalent; however, many individuals (particularly those in semi-urban and rural regions) experience barriers to finding job opportunities despite already having possess valuable skills. An individual's ability to develop skills and find job opportunities can be affected by factors such as lack of awareness; limited access to digital platforms; lack of connectivity between the user and service provider; and, therefore, ultimately leads to a deficit of jobs and underutilization of skills. Research has shown that limited access to digital devices and the digital divide impact Participation in the online world through platforms [7]. Existing Learning Systems provide skill development but generally do not incorporate direct job connections into their learning systems

[1],[2].

The two main types of traditional skill development/service searching platforms operate independently of one another and are, therefore, not efficient in connecting users to available opportunities. Community-based skill development/service searching systems generally create local opportunities but tend to have scalability issues in growing and improving their respective regions [3]. Data-driven job matching systems are enhanced through improved matching accuracy; however, they often lack the ability to provide real-time user communication and interactivity [4]. Although recommendation systems assist users in creating a personal learning experience, they generally fail to provide for job connectedness [5]. Gig economy platform usage increased among users looking for opportunities; however, they often do not afford users trust, transparency, or proper skill verification [8]. Lack of user trust and engagement will ultimately impact their hiring decisions, as evidenced by online portfolio studies [9]. Finally, while real-time user communications facilitate interactions between users, they do not provide for the transfer of skills or knowledge. To overcome these issues, we propose a Local Skill Hub, a full-stack web-based platform designed to connect skilled individuals with users seeking services within their locality. The system enables users to create profiles, showcase their skills, and interact with potential clients through real-time communication and booking features. It provides an easy-to-use and accessible interface, ensuring usability even for non-technical users. By integrating multiple functionalities into a single platform, the system reduces dependency on multiple applications and improves efficiency in skill-based service delivery. Furthermore, the platform promotes local employment, enhances user trust, and supports economic growth by creating a reliable ecosystem for skill-based interactions.

II. LITERATURE SURVEY

Several studies have focused on skill development, job matching, and digital platforms to enhance employment opportunities. A. M. Khedkar and S. S. Babar [1] developed a web-based skill development platform aimed at improving employability by providing online learning resources. R. S. Patil and P. R. Deshmukh [2] proposed a mobile learning application for rural skill development, which improves accessibility for users in remote areas. S. Kumar, A. Verma, and R. Singh [3] introduced a community-based vocational training model using digital platforms to support local skill development. In the area of job matching and recommendation systems, J. Zhang, Y. Li, and H. Chen [4] presented a data-driven framework to efficiently match user skills with job opportunities. M. Tavakoli, S. Hakimov, and G. Kismihók [5] developed a skill-based recommendation system to support lifelong learning and personalized skill enhancement. L. C. Juera [6] explored simulation-based mobile learning to improve user engagement and provide interactive learning experiences. Furthermore, A. Gupta, R. Patel, and S. Jain [7] highlighted the issue of the digital divide in semi-urban communities, which restricts access to digital platforms and limits employment opportunities. R. Kumar and V. Sinha [8] conducted a comparative study of gig economy platforms in India, identifying challenges such as lack of transparency and trust. J. Nielsen [9] emphasized the importance of user trust and engagement in online portfolios, which significantly influences hiring decisions. Sharma et al. [10] proposed real-time communication and booking systems that enable efficient interaction between users and service providers. However, most of these systems focus on specific functionalities such as learning, recommendation, or job matching independently. They lack integration of real-time communication, proper trust mechanisms, and unified service delivery. Additionally, issues such as limited scalability, lack of employment linkage, and restricted accessibility in semi-urban areas reduce the overall effectiveness of these systems. These limitations highlight the need for a comprehensive platform that integrates skill development, job matching, and user interaction into a single system.

III. METHODOLOGY

A. Requirement Analysis and Design

The Local Skill Hub system was first analysed to see what was available and how existing platforms failed to motivate youth to operate in a realistic way (lack of integrated jobs); limitations of existing platforms; gain an understanding of current systems in terms of scalability obtain insight into the number of jobs that have been posted and know when should jobs be posted in real-time. Based on these issues identified in the previous section, the design of this Local Skill Hub is to provide a one-stop solution for all your skill showcase needs (presented) along with skill matching to job postings via a single source and user interaction [2],[3],[10]. In the implementation of the Local Skill Hub, the system will consist of three layered architecture, consisting of Presentation Layer, Application Layer, and Database Layer. The Presentation Layer will consist of the foundational code elements of the local skill hub including HTML, CSS, JavaScript, and Bootstrap for user friendly, web responsive interface design and responsive mobile device application design. The Application Layer will consist of PHP with a role-based access control method to manage; admin, service provider, customer, etc. The Database Layer will consist of MySQL database to track user details, skills, jobs posted, etc. This architecture will allow the Local Skill Hub to be modular, create a scalable product and create the ability for the Local Skill Hub to work at an efficient performance level.

B. System of Development

This system is created as a full stack web application using XAMPP as the server environment with Apache server, PHP and MySQL. The Front End will enable users to register, login and use the front end of the application. The Back End will be responsible for all the core functionality of the application i.e. Authentication; Profile Management; Skills (Available Services) Listing; Job Posting. The service providers will add their skills and/or services and the customers will search for the skills/services required by using the keyword or by category. The System will take user input and match it to the appropriate service providers through the use of various filtering techniques, similar to data driven matching systems [4]. Also, the system will allow real-time

communications between users and provide the ability for users to book services through the system. This addresses the limitations of current systems that have no integrated communication mechanisms [10].

C. Testing and Analysis

The newly created system will undergo multiple testing phases prior to final implementation to ensure it operates as intended, is user-friendly, and provides acceptable performance levels. The system will be functionally tested to ensure that the following features will be operational: registration of users; login of users; listing of skills available for hire; job searches to hire a qualified person; and booking of that qualified person to perform a job. Usability tests will be performed to ensure that the system's interface is easy to use for a wide range of users based upon their level of technical expertise and that accessibility concerns addressed through previous work are met. [7]. Testing will also be conducted regarding how quickly or slowly the system responds to users and how quickly or slowly the system retrieves requested data from the MySQL database. Another aspect of testing will be performed on how effectively the system matches potential service providers with user-generated requests, thus improving efficiency over existing platforms. Basic security tests will be performed by using password encryption to protect the content of user records.

D. Implementation and Testing

The system will be installed on a server in a local environment using XAMPP as the server environment for conducting test and evaluation activities. The server used is the Apache server to conduct requests from users, while PHP and MySQL will manage all functions of the application and store all user and employee data. Once the system is operational and ready for implementation, evaluation of the system will take place by observing how individual users engage with the site and by measuring how effectively services requested by users on the site are matched with available workers. Based upon observed levels of engagement, improvements in the level of appropriateness of communication between users, and faster service to users, the Local Skill Hub application aims to decrease the level of fragmentation between service providers and users compared with current platforms used for the same purpose.

IV. SYSTEM ARCHITECTURE

The proposed Local Skill Hub system is designed using a layered architecture approach to ensure modularity, scalability, and efficient data handling. The system is divided into three main layers: Presentation Layer, Application Layer, and Database Layer, all integrated within a client-server environment.

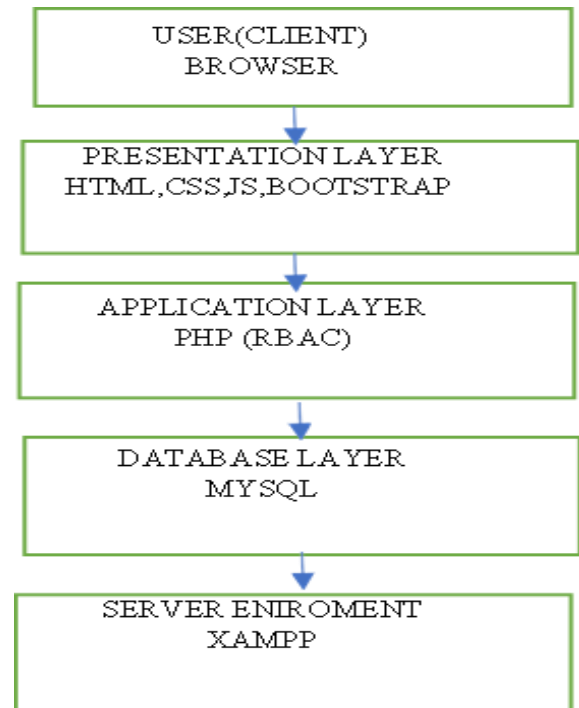


Fig: -4.1

Fig. 4.1 illustrates the system uses a layered architecture where users interact via frontend, processed by PHP backend, data stored in MySQL, and executed through XAMPP server for efficient performance and scalability.

A. Presentation Layer

The presentation layer represents the user interface of the system and is developed using HTML, CSS, JavaScript, and Bootstrap. This layer provides a responsive and user-friendly interface that allows users to interact with the system efficiently. It includes functionalities such as user registration, login, profile creation, skill listing, job searching, and service booking. Bootstrap is used to ensure a modern and responsive design that adapts to different devices, improving accessibility for users with varying technical skills.

B. Application Layer

The application layer is implemented using PHP and handles the core logic of the system. This layer processes user requests, manages session handling, and controls system operations. Role-Based Access Control (RBAC) is implemented to differentiate user roles such as admin, service providers, and customers. The backend performs key operations such as authentication, profile management, skill posting, job matching, and booking management. It also enables communication between users by handling requests and responses efficiently. Basic security is ensured through password encryption using MD5, which protects user credentials from unauthorized access.

C. Database Layer

The database layer uses MySQL to store and manage all system data. It includes tables for user information, login credentials, skills, job listings, and booking details. The database ensures structured storage, quick data retrieval, and efficient handling of large volumes of data. Proper relationships between tables are maintained to ensure data integrity and consistency.

D. Server Environment

The system is deployed using the XAMPP server environment, which provides an integrated platform consisting of Apache server, PHP, and MySQL. Apache handles client requests and serves web pages, while PHP processes backend logic and interacts with the MySQL database. This environment allows easy development, testing, and deployment of the system. Overall, the system architecture ensures smooth interaction between frontend, backend, and database components. The layered approach improves system performance, enhances maintainability, and provides a scalable solution for connecting skilled individuals with potential clients through a unified platform.

V. IMPLEMENTATION

The implementation of the proposed Local Skill Hub system is carried out using a full-stack web development approach, integrating frontend, backend, and database technologies to ensure smooth functionality and user interaction.

A. Technology Stack

The Local Skill Hub system is developed using a full-stack web development approach. The frontend is implemented using HTML, CSS, JavaScript, and

Bootstrap to provide a responsive and user-friendly interface. The backend is developed using PHP, which handles application logic and supports Role-Based Access Control (RBAC) to manage different user roles such as admin, service providers, and customers. MySQL is used as the database for storing user data, skills, services, and booking information. The system is deployed using the XAMPP server environment, which integrates Apache server, PHP, and MySQL, ensuring smooth execution and easy testing of the application.

B. Data Flow and Processing

The data flow in the system begins with user input through the frontend interface, where users register, log in, or perform actions such as searching for services or posting skills. These requests are sent to the backend, where PHP processes the data, validates user input, and performs necessary operations. The backend interacts with the MySQL database to store and retrieve information efficiently. For example, when a customer searches for a service, the system processes the query and retrieves matching results from the database. Similarly, booking requests and communication messages are processed and stored, ensuring smooth interaction between users. The system follows a structured flow where data moves from the presentation layer to the application layer and finally to the database, and the processed results are returned to the user interface.

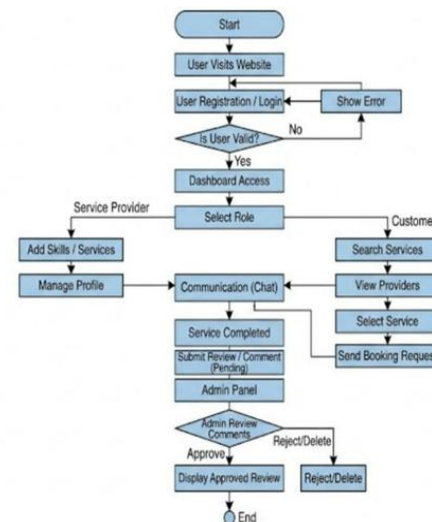


Fig: - 5.1

Fig. 5.1 illustrates, Dataflow diagram is visual

diagram that maps out a process how user inputs are processed through the system, showing data movement between frontend, backend, and database to generate required outputs efficiently.

C. Dashboard Functionality

The system provides separate dashboards for different users based on their roles. After successful login, users are redirected to their respective dashboards. Service providers can manage their profiles, add or update skills, and monitor service requests. Customers can search for services, view provider details, send booking requests, and communicate with service providers.

The admin dashboard allows overall system management, including monitoring user activities, managing accounts, and reviewing user-generated content such as comments or reviews. Role-Based Access Control ensures that each user can access only the features relevant to their role, improving security and usability.

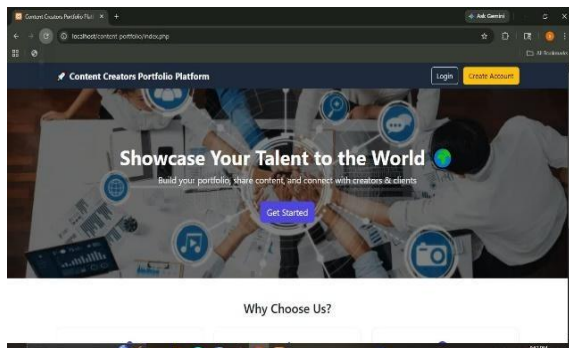


Fig: -5.2

Fig 5.2 illustrates, the login/admin page authenticates users using credentials and provides role-based access, allowing admin to manage users, services, and system activities securely and efficiently.

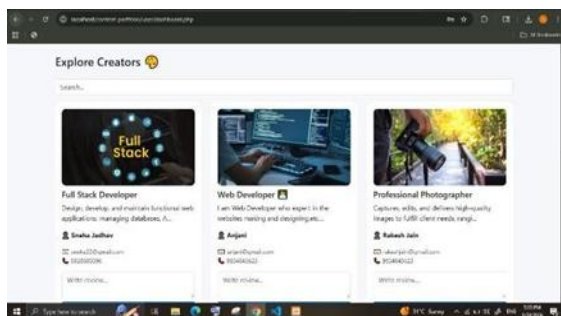


Fig: - 5.3

Fig 5.3 illustrates; the creator builds their own portfolio as per their services.

Name	Email	Role	Action
Admin	admin@gmail.com	Admin	Edit
Sanjay	sanjay@gmail.com	User	Edit
Anjali	anjali@gmail.com	Creator	Edit
Saravathi	saravathi@gmail.com	Creator	Edit
Rajesh Kumar	rajeshk@gmail.com	Creator	Edit
Sunil Ray	sunilray@gmail.com	Creator	Edit
Shruti	shruti@gmail.com	User	Edit
Rakesh Kumar	rakeshkumar@gmail.com	Creator	Edit

Fig: - 5.4

Fig 5.4 illustrates that admin manages user portfolio activity. Analysis performances and services for approval or rejection.

D. Deployment and Analysis

The system is deployed using the XAMPP server environment, which provides a local server setup with Apache handling client requests, PHP executing backend logic, and MySQL managing data storage. This setup allows easy development, testing, and deployment of the application.

After deployment, the system is analyzed based on performance, usability, and functionality. The platform ensures efficient data processing, quick response time, and smooth interaction between users. The integrated approach of combining skill listing, job matching, and communication improves overall system efficiency and enhances user experience. The system demonstrates its effectiveness in connecting skilled individuals with local opportunities and promoting better utilization of skills.

VI. CONCLUSION AND FUTURE SCOPE

The Local Skill Hub system proposed in this paper effectively helps connect skilled people and potential customers by combining skill promotion, job matching and instant communication into one convenient location. The Local Skill Hub solves many of the problems associated with other systems that focus on one aspect of each element without producing a complete solution, such as only providing an avenue for people to create profiles and list their skills, searching for services and directly communicating with service providers. The Local Skill Hub can be used by individuals located in semi-rural and rural areas. Because of using a full-stack technical environment, the development of the Local Skill Hub has resulted in good efficiency for handling

data, responsiveness for actions taken by the user, and good performance of the Local Skill Hub system experience. Overall, the development of the Local Skill Hub adds to the creation of local jobs and the trust of users in the system while enabling better use of local skills. Future improvements for the Local Skill Hub could include additional functionality such as instant notifications to users, payment gateways to facilitate secure transactions, ai based recommendations for matching users with jobs, mobile apps to increase the potential users of the Local Skill Hub and additional security measures and data encryption of user data. Future work on the Local Skill Hub may also include enhancing or improving the accuracy of using location-based services with the Local Skill Hub.

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