

Local Hire: A Mobile Application for Connecting Local Job Seekers with Employers

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Abstract: Many local communities continue to rely heavily on unofficial methods for recruiting employees. These include speaking to people and using website advertising. The structure of these older methods of recruitment restricts how visible jobs are and also takes longer to fill jobs with an employer and employee. A large part of this problem is that there is no standard online system designed to provide local employment opportunities in one place.

This paper introduces the Local Hire mobile app that connects employers with potential employees within a certain area. The application was created collaboratively using the Android Studio mobile application software development and Firebase as a backend system for authentication and real-time data updates. It also uses a client-server structure to allow employers to post job information (i.e., position title, salary, location, type of employment) along with providing job seekers the ability to view and apply for open positions, along with being able to track the status of their application.

The implementation of the proposed Local Hire system demonstrates that it can serve as a centralized, user-friendly platform that enables companies to recruit new hires and improve communication with potential employees. The outcome of this work demonstrates that the Local Hire system can significantly improve the ability for local residents to find work in their communities. Overall, the Local Hire system can offer an improved experience in searching for local employment opportunities for both employers and potential employees.

Keywords: Local Hiring, Mobile Application, Job Portal System, Cloud Database, Client-Server Architecture, Digital Recruitment.

I. INTRODUCTION

Employment opportunities at the community level have great impact in supporting a person or a small suburb. For many individuals, nearby jobs as a shop assistant, delivery person, helper, or the like, make up the majority of their daily employment support. Most times when individuals are looking for these types of jobs, they utilize informal means such as friends and family, personal referrals, and local flyers as a way to locate them. Using these traditional methods of finding or managing jobs can make it difficult for potential job seekers to identify job opportunities quickly and also for employers to efficiently reach out to potential candidates. Since there is no central organization managing job postings and job applications, the hiring process can become a long, disjointed and unreliable experience.

Additionally, as the number of job seekers and employers are growing, it is becoming more challenging to manage the traditional methods of recruiting. Therefore, there is a necessity for a straightforward and organized digital platform that can streamline the local hiring process.

To help solve this problem, we propose the Local Hire System: a mobile based application that connects local employers to job seekers through a centralized digital location. The application is developed using Android Studio for mobile development and Firebase for the security of logged-in users and cloud storage of posted job information. Employees will be able to create job postings electronically or multipages within the app.



II. NEED OF PROJECT

The extensive search for local hiring continues to prove lengthy and ineffective in many communities across the local communities. Many employers and candidates still rely on the traditional methods of advertising available to them word-of-mouth marketing, personal contacts, and print advertisements to source and fill positions. A number of barriers exist that prevent these traditional methods from reaching the largest number of possible sources that will help fill an open position. In addition, there is typically no centralized platform for effectively managing job postings or job applications.

As the number of employers and job seekers increases in a given area, the complexities of manual recruitment processes increase exponentially, resulting in more time wasted and greater opportunities for mistakes. As job seekers become increasingly frustrated at a large number of missed opportunities, employers will find themselves struggling to locate suitable candidates.

Digital solutions available today can create new opportunities for both job seekers and employers. A new digital hiring platform has been developed that enables the efficient and effective digital local hiring process to exist. The key benefits for employers when using this platform include the ability to easily post jobs available for hire, manage job applications from start to finish, and receive real-time updates on the status of their recruitment efforts. For employment seekers, the key benefits of using this hiring platform are the ability to search for available jobs, filter the resulting job openings according to their own preferences, rapidly apply for jobs of interest, and monitor the status of their job applications.

The ideal digital hiring platform will have the following features:

- Access to job postings and job applications in real-time
- Secure role-based access to job postings/applications for employers and job seekers
- Automated job application status updates and automated tracking
- Ability to accommodate a greater number of job seekers and job postings than were previously available.

III. PROBLEM DEFINITION

In numerous local communities, employment recruitment continues to rely on conventional and informal approaches, including word-of-mouth referrals, local advertisements, and personal connections. These methods hinder job seekers from quickly finding suitable employment opportunities. Likewise, employers encounter difficulties in efficiently connecting with potential candidates. The absence of a centralized platform for managing job postings and applications results in a hiring process that is slow, disorganized, and time-consuming.

Manual job search methods also suffer from inadequate record-keeping and a lack of structured communication between employers and job seekers. Job seekers often struggle to track opportunities because information on available positions is frequently dispersed across various sources. Employers also struggle to manage numerous applications and maintain accurate records of candidate information. Furthermore, the recruitment process lacks transparency, and job seekers frequently receive no updates regarding their application status.

Consequently, there is a need to create a straightforward and well-structured digital platform that effectively links employers with job seekers. The primary objective of this project is to create a mobile-based Local Hire System that serves as a centralized platform for employers to post job openings and for job seekers to search, apply, and monitor their application status. This system streamlines the hiring process and enhances access to local job opportunities.

IV. LITERATURE REVIEW

In recent years, digital recruitment systems have become more common than traditional hiring methods because they make it easier to access jobs, save time and money, and improve how job seekers and employers communicate. DeLone and McLean [1] created a key framework for evaluating information systems, which can be used to check how well digital recruitment systems work in terms of their quality, how satisfied users are, and how effective they are overall. Prakash [2] looked at e-recruitment and selection in the digital age, pointing out benefits like quicker matching of



candidates, reaching more applicants, and better handling of job applications. Rathinasetupathi et al. [3] made an Android app that connects local workers with users, showing how mobile-first systems can help with local employment. Shetty et al. [4] also created a similar Android platform that links local job seekers with employers, focusing on how mobile access and managing applications can improve the hiring process. Maurer and Liu [5] studied effective e-recruitment websites, giving managers advice on how to improve their online hiring strategies. Naveena and Prof. R. D. M. [6] examined new trends and methods for better e-recruitment in organizations, stressing how important digital platforms are for making hiring processes smoother.

These studies together show how important mobile and cloud-based recruitment platforms are becoming. Based on these findings, the Local Hire System is proposed as a mobile-first solution that connects local employers with job seekers, providing one place to view job postings, track applications, and manage data in real time, making the local hiring process simpler.

V. METHODOLOGY TO SOLVE THE PROBLEM

There are three portions that make up the Local Hire System and the architecture type that it uses is known as a three-tiered architecture. The reason that this type of architecture is beneficial is due to its ease of use, being able to accommodate large numbers of users and because of how simple it is to modify.

The system architecture has three layers:

1. The Presentation Layer
2. The Application Layer
3. The Database Layer

This way each part has its job and the system works well.

5.1 Presentation Layer

The Presentation Layer is what the user sees. It is the interface of the application. We use XML to design the screens and Java to make things work. This layer shows information to different users. If you are an employer you can post jobs. See who applied. If you are a job seeker you can see what jobs are available and apply for them. Both employers and job seekers can change their information. The interface is simple so anyone can use it.

5.2 Application Layer

The Application Layer is the brain of the system. It handles all the work on the server side. We use Firebase to make it work. When users log in the system checks who they are and what they can do. Employers can. Remove job postings. The system keeps track of who applied for what job and what happened to their application. The system updates in time so everyone sees the same information. Employers can only see their job postings and applications. Job seekers can only see their applications.

5.3 Database Layer

The Database Layer is where we store all the information. We use Firebase Realtime Database. It stores information, about users, job postings and applications. We keep track of who the user are what jobs are available and who applied for what job. The database is secure. Can handle a lot of users at the same time.

This way many people can use the system without any problems. The Local Hire System is designed to be easy to use and work well for everyone. The Local Hire System has an interface so the Local Hire System is easy to navigate.



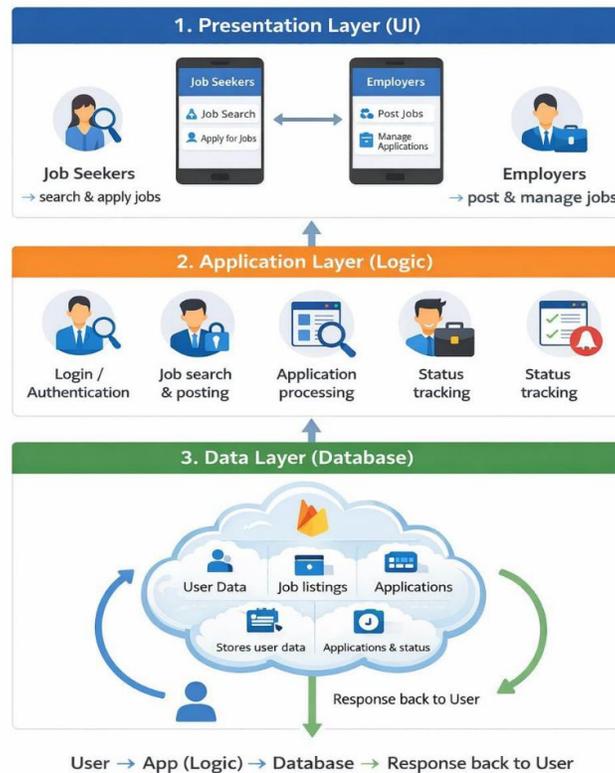


Fig. 1. Local Hire system Architecture

VI. OBJECTIVES OF PROPOSED WORK

1. We're developing a user-friendly application that will facilitate job-searching for everyone in the area as well as simplify the hiring process for all surrounding businesses.
2. The Application will contain a job posting feature for anyone seeking employment to apply to their desired position.
3. Job seekers will have the ability to locate jobs through various filters and can apply directly to them through the job search feature.
4. The application will have very stringent security measures in place to ensure that only users that are authenticated are able to modify information on the app.
5. We will utilize Firebase as our database platform so that we can retrieve and save data quickly and securely.
6. The application's primary objective will be to allow local residents to browse jobs in their local area and allow area businesses to fill their open positions.
7. We are developing the application to allow for ease of future enhancements by utilizing a modular design and component-based architecture.



VII. DETAILS OF DESIGN, WORKING, AND PROCESS

7.1 System Design

1. The system consists of 3 components. The first component is the user-facing part of the system. The second component is the behind-the-scenes work that happens to fulfill a user's action. And lastly, the third component is the database in which the user and job information resides.
2. The user-facing part of the system is the app. The app will be developed in XML and Java.
3. The backend portion of the system is the Firebase. This is where all of the behind-the-scenes functions will take place (user login, job postings, etc...).
4. The database component is the Firebase Realtime Database, which will hold the user and job data.
5. The app is designed to show different types of content to users, based on their role.

7.2 Working of the System

1. First users log in, They choose if they are an employer or a job seeker.
2. Employers can post jobs, They can add details like job type, location and salary.
3. Job seekers can view jobs and They can cancel applications.
4. Employers can see who applied, They can reject applications.
5. Both employers and job seekers can update their information.

7.3 Processes

1. The posting of a job by an employer is stored and becomes accessible to all prospective job candidates via Firebase.
2. Once a job candidate applies for a job, their application will be saved, and the employer will be notified.
3. Once an employer decides whether or not to hire an applicant, that information will be sent to the applicant.
4. These actions occur concurrently, and everyone involved has access to the same information.

VIII. RESULTS AND APPLICATIONS



Fig.2. Local Hire System – Role Selection Screen

Fig 2 image shows the screen where users choose their role.



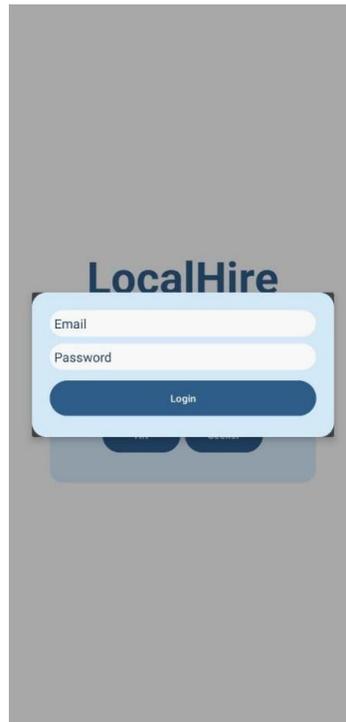


Fig.3. Local Hire System-Login Screen

Fig 3 image shows the login screen.



Fig.4. Local Hire System – HR Dashboard Screen

Fig 4 shows the screen where employers can view and manage jobs.



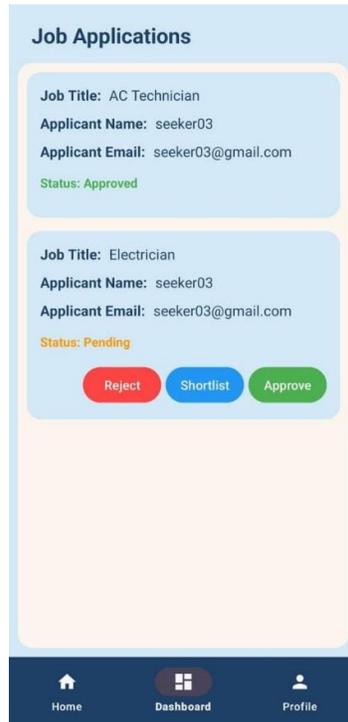


Fig.5. Local Hire System – Job Applications

Fig 5 shows This image shows the screen where employers can see applications.



Fig.6. Local Hire System – HR Dashboard Screen

Fig 6 shows the screen where employers can view their information.





Fig.7. Local Hire System – Job List

Fig 7 shows the screen where job seekers can see jobs.



Fig.8. Local Hire System – Seeker Applied Job List

Fig 8 shows the screen where job seekers can see their request's current state.



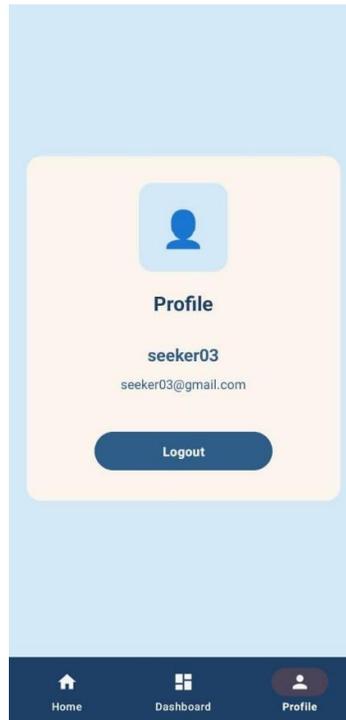


Fig.9. Local Hire System – Seeker profile

Fig 9 shows the screen where job seekers can view their information.

IX. CONCLUSION

The Local Hire System is a platform that uses mobile technology to help match local job seekers with employers in a simple, efficient, and organized manner. This project uses a three-tier architecture to create a mobile application based on XML and Java with backend services using Firebase providing real-time data storage, access, and role-based security. The platform is designed to allow employers to post job opportunities, manage applications and job seekers can browse, apply for and track their applications in real time.

The Local Hire System provides a more efficient and practical digital solution that moves away from the traditional informal hiring processes and supports job seekers who may have limited technological expertise. Overall, the Local Hire System provides an innovative and practical means of managing local employment opportunities. The Local Hire System will encourage improved communications between potential employers and job seekers while transforming the digital landscape for local recruitment.

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