# Job Portal Mobile Application

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***Abstract — In today's highly competitive industrial landscape, the job market is no exception. An employment mobile application serves as a platform that offers information to both hiring managers and job seekers. The proposed paper suggests a collaborative platform for recruiters and job seekers. The primary goal of this application is to develop a system that facilitates communication between employers and candidates. This interaction is promoted to streamline and accelerate the recruitment process. The aim of this study is to design an employment portal specifically for university students to efficiently secure on-campus placements.***

***Keywords — application, job, portal, OOP***

## I. INTRODUCTION

One of the major challenges facing both developed and developing countries is unemployment. For instance, in Europe, the unemployment rate steadily increased during the 1970s. According to Dorn and Naz, a key factor contributing to this issue is the unequal distribution of information about job opportunities, or the lack thereof, which limits people's awareness of available positions. This implies that while there may be vacant jobs, many job seekers are unaware of them. Conducting a successful online job search can be highly beneficial for those seeking employment. With the internet, job seekers can easily find information about job openings through various websites. In today's world, the internet has transformed many aspects of life, including the job search process. Individuals looking for work can now create resumes using tools like Microsoft Word, submit them online, and receive responses via email. Online recruitment has become an efficient method for both companies and job seekers to achieve their goals. Employers often post job openings through universities and colleges, and both large and small companies now use online hiring methods. Universities also use these job portals to share information about vacancies and connect with potential candidates. According to Gangle, the process of searching for jobs advertised electronically is known as "virtual" or "digital recruitment." Employers can post job openings, store applicant resumes, and connect with suitable candidates through online platforms. Today, the internet is one of the most common ways to discover job opportunities. Many large institutions, including universities, have websites linked to recruitment portals that provide career information.

## II. FEATURES

- Online Job Search Efficiency**:** The platform enhances the efficiency of job searches by providing a centralized location for job postings, allowing job seekers to easily discover and apply for relevant opportunities.

- Accessible Recruitment Channels**:** Through the integration of university and employer job portals, the system creates direct links between job seekers and employers, streamlining the recruitment process for both parties.

- Digital Resume Management**:** The system enables applicants to submit their resumes online, where they can be stored, reviewed, and managed by employers for potential job matches.

- Widespread Use of Digital Recruitment**:** The platform supports "virtual recruitment," where jobs are advertised and filled through digital channels, reflecting the growing trend of internet-based hiring methods in modern recruitment.

- Increased Information Accessibility**:** By disseminating information about available job openings widely, the platform helps address information gaps, ensuring that job seekers are aware of employment opportunities that may otherwise go unnoticed.

## III. PROJECT OBJECTIVE

The objective of this project is to create a professional job portal aimed at streamlining the job search and hiring process for students in a college or university

setting. The system will cater to both job seekers and recruiters, ensuring a smooth experience for both parties.

1. User Role Selection:

The job portal will allow users to choose between being a job seeker or a recruiter. Based on this selection, the portal will display relevant content and features tailored to each role.

2. Track Applied Job Records:

The system will allow students to keep track of all the companies they've applied to, ensuring they never lose track of opportunities or forget previous applications.

3. Profile and Job Posting Management:

If the user is a job seeker, they will be required to provide their personal details, qualifications, and other necessary information to apply for jobs. On the other hand, recruiters can submit job postings by filling out all the required job details to request job listings on the platform.

4. Application and Communication:

Job seekers will have access to view all available job opportunities and apply directly through the portal. They can upload their resumes and, if shortlisted, engage in discussions with recruiters to proceed with the hiring process.

## IV. LITERATURE REVIEW

The evolution of job portals and skill development platforms has significantly impacted employment opportunities and skill acquisition. A comprehensive review of the literature reveals that while many systems offer either job portal services or skill development features, few integrate both functionalities. These systems utilize various technologies and methodologies, including different recommendation algorithms, each with specific advantages depending on the context. Notably, Collaborative Filtering (CF) and Content-Based Filtering (CBF) techniques have shown both strengths and limitations. For instance, CF may benefit from incorporating CBF, and vice versa, to address some of their inherent issues. Knowledge-Based Recommendation Systems (KB RSs) face challenges due to knowledge acquisition difficulties and the lack of standardized benchmark datasets, indicating a need for further research in this area.

Despite advancements, current job recommendation systems often rely on existing job descriptions and skill tags, which may not fully align with actual job requirements

or candidate qualifications. This limitation underscores the importance of incorporating additional factors such as company culture, career advancement opportunities, and work-life balance into the recommendation process.

The use of cosine similarity for matching user profiles with job descriptions may also be less effective than more sophisticated techniques such as clustering or neural networks. Future enhancements could include developing user-facing applications for real-time job recommendations and integrating diverse data sources, like social media profiles and online learning platforms, to improve the accuracy and relevance of recommendations.

The application of big data analysis technology has notably improved job placement rates, salary levels, and job satisfaction among college graduates. By enhancing data acquisition, processing, and visualization, big data technologies have made job matching more accurate and efficient.

Future research should focus on integrating authoritative data from educational platforms, diversifying data sources, and refining data modeling techniques to further enhance the accuracy of recommendation algorithms. These improvements will contribute to making employment services more reliable and valuable for job seekers.

A Django-based web application designed to assist college students in finding suitable jobs demonstrates the effective use of data crawling, processing, and visualization. This platform analyzes job postings to extract relevant keywords and provide insights into job requirements. By making recruitment data more accessible and transparent, the system aims to support job seekers and employers alike, improving the overall job search process.

In another study, a Content-Based Filtering algorithm was implemented in a job recommendation system, complemented by Android app development using Kotlin, Jetpack Compose, Ktor, FastAPI, and MongoDB. This approach focuses on matching jobs to user skills based on similarity.

The system employs JWT tokens for authentication and FastAPI for API development, showcasing a

commitment to delivering accurate and relevant recommendations. Future improvements might involve real-time applications and incorporating additional data sources to refine recommendations further.

The exploration of mobile application development has highlighted the benefits of hybrid apps, which offer performance comparable to native applications while providing cross-platform compatibility at a lower cost. User experience remains a crucial element in app development. Future research should delve into how different mobile app characteristics influence development practices, aiming to enhance both the functionality and user experience of mobile applications.

User feedback on furniture applications revealed high satisfaction levels, especially among females aged 21 to 30. The feedback on design elements and overall UI/UX was positive, indicating that users found the app intuitive and easy to navigate. The integration of artificial intelligence techniques such as data mining and machine learning could further improve UI/UX design and evaluation.

The modernization of campus recruitment systems has introduced a unified platform for students and companies, addressing the need for efficient job matching. Future enhancements could include implementing collaborative filtering-based recommendations, sending tailored email notifications, and adding features for resume-building. These improvements would support students in their job search and help companies find suitable candidates.

The platform supporting skill development through quizzes and resources tailored to various engineering disciplines has the potential to impact the Indian economy positively. By improving users' skills and facilitating job applications, the platform can contribute to reducing illiteracy and alleviating poverty, thereby supporting overall economic growth.

In conclusion, this study underscores the potential of machine learning algorithms in refining job matching and delivering personalized job recommendations. Future research should focus on evaluating these techniques' effectiveness and developing advanced algorithms. The integration of AI and web scraping holds promise for simplifying and improving the job search process.

The rapid expansion of e-recruitment has transformed recruitment strategies by broadening job opportunities and reducing costs. This study highlights the development of an online recruitment platform aimed at connecting students with companies, enhancing job search outcomes, and tailoring platforms to academic institutions' needs.

Finally, an Android application designed for recruitment aims to streamline the connection between students and recruiters. The app focuses on user-friendly design and efficient operation, providing a valuable tool for facilitating employment opportunities.

## V. METHODOLOGY/EXPERIMENTAL

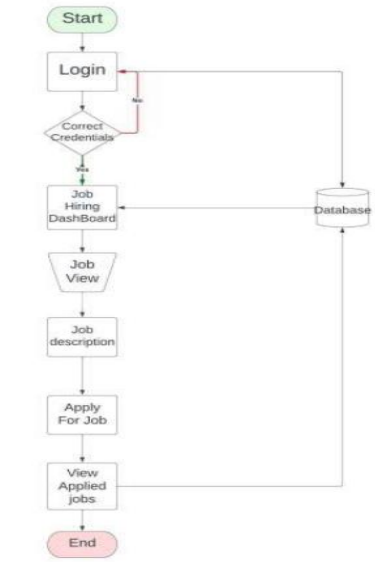
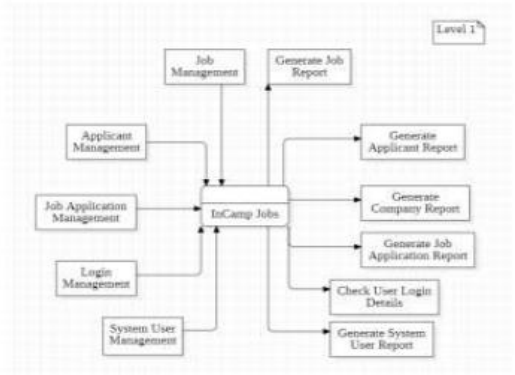



Fig.2. Flowchart of the Website

### *O. Data Flow Diagram*

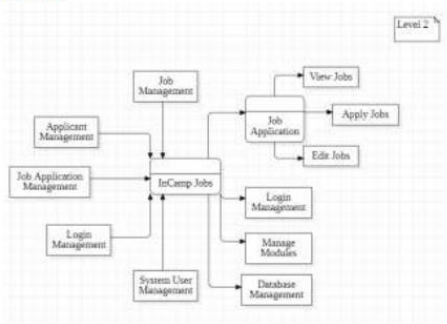
The data flow diagram illustrates the user interaction process within a job application system on a website. The process starts with the user logging in. If the credentials provided are correct, the user gains access to the Job Hiring Dashboard. From the dashboard, they can browse and view available jobs, which pulls data from the database. After selecting a job, they are presented with a detailed job description. If the user finds the job suitable, they can apply for it, with the application being stored in the database. Additionally, the user can view a list of jobs they have previously applied for, which is also retrieved from the database. The system ensures that all job-related actions, such as viewing job details and submitting applications, are integrated with the database. If login credentials are incorrect, the user is prompted to retry until they provide valid credentials. The process concludes either after the user completes these actions or when they decide to end the session.

Level 1:

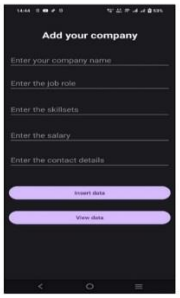



The diagram presented appears to be a Level 1 Data Flow Diagram (DFD) for a job management system named "InCamp Jobs." It breaks down the various processes and data flows related to managing job applications and users. The core of the system is "InCamp Jobs," which is connected to several management and reporting functionalities. The system includes Job Management, which handles the creation, editing, and maintenance of job postings. Applicant Management focuses on handling applicant information, and Job Application Management manages the applications submitted by users. Login Management handles user authentication, while System User Management oversees system user roles and credentials. On the reporting side, the system can generate various reports: Job Report for tracking job-related data, Applicant Report for summarizing applicant details, Company Report for company-related statistics, Job Application Report for viewing details of job applications, and a System User Report for information on system users. Additionally, it checks user login details for authentication and security purposes. The diagram shows a clear structure for managing job postings, applications, users, and generating comprehensive reports, with each module interacting with the central "InCamp Jobs" system. This level of the DFD provides an overview of the key functions and how they interact within the system.

Level 2:

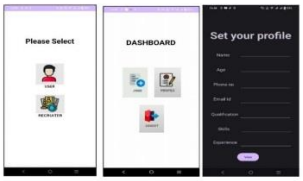



The Level 2 Data Flow Diagram (DFD) of the "InCamp Jobs" system delves into the specific functions of the job management platform. It further breaks down the core modules introduced in Level 1. The Job Management module connects to the Job Application process, where users can view available jobs, apply for jobs, and edit job applications. This illustrates the user's interaction with job postings. The Login Management module oversees the management of login credentials and system access, ensuring that users can interact with different Manage Modules based on their permissions. Additionally, Database Management ensures that all data related to job applications, user accounts, and system management are stored and retrieved efficiently. Other modules like Applicant Management and Job Application Management continue to handle user and application data, while System User Management controls administrative users and their access rights. This diagram gives a more granular view of how the system functions, emphasizing detailed user actions and database interactions within the platform.





**Screenshots of results**


## VI. RESULTS AND DISCUSSIONS

The platform has enhanced the user experience by providing separate interfaces for job seekers and recruiters, allowing for a smoother and more focused

interaction. This distinction has led to faster navigation and more relevant content for each user type.

Job seekers now benefit from a streamlined application process, where they can easily set up their profiles, upload resumes, and provide all necessary details in one place. Additionally, the ability to interact with recruiters after their resume is shortlisted has improved engagement and the chances of securing job opportunities.

Recruiters have found the system efficient for managing job postings. They can quickly submit job details and communicate directly with candidates, speeding up the hiring process and improving candidate selection.

Students now have better access to job listings and the ability to track their applications, ensuring they stay organized and never miss out on opportunities. This has led to increased application rates and improved job search outcomes.

## VII. FEASIBILITY ANALYSIS

- Students will receive information about all job openings occurring on-campus.
- All job-related details will be consolidated in one platform for easy access.
- The mobile application is built to be fully responsive.
- Each student will have a personalized profile with a record of the jobs they have applied for.

## VIII. CONCLUSION

The job portal has proven to be a highly efficient platform for both students and recruiters by simplifying the hiring and job application process. Its role-specific interface enhances user experience by tailoring functionalities for job seekers and recruiters, ensuring a smooth and personalized workflow. Job seekers can easily create profiles, apply for positions, and engage with recruiters, increasing their chances of landing a job. Meanwhile, recruiters benefit from the system's streamlined job posting and candidate management features, making the hiring process more efficient. Additionally, the ability for students to track their applications ensures they stay organized and never miss important opportunities, reinforcing the platform's value in the job-seeking and recruitment process.

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