CAREER GUIDANCE WEBSITE

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this Thesis titled **"CAREER GUIDANCE WEBSITE**" is the bonafide work of "**ABITHA M (2116210701011), ADITI S (2116210701016)"** who carried out the work under my supervision. Certified furtherthat to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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ABSTRACT

In today's competitive job market, finding the right career opportunities can be daunting for job seekers, while employers face challenges in identifying suitable candidates. "CareerQuest" is an innovative platform designed to address these challenges by offering personalized job recommendations and efficient recruitment solutions. For job seekers, CareerLink provides tailored job suggestions based on their skills, experience, and preferences. Using advanced algorithms, the platform analyzes user profiles to deliver relevant internship listings, empowering individuals to explore diverse career paths aligned with their goals. Additionally, CareerQuest offers a wealth of resources for career development, including skill enhancement tools, educational materials, and networking opportunities, to support users in their professional journey. On the employer side, CareerQuest streamlines the recruitment process by facilitating efficient candidate screening and selection. Employers can post job openings, set specific criteria, and leverage sophisticated matching algorithms to find the best-suited candidates for their roles. The platform fosters transparent communication between employers and job seekers, enabling seamless interaction throughout the hiring process. CareerQuest aims to bridge the gap between job seekers and students, promoting mutual success in the job market. By providing a user-centric and integrated platform for career advancement and recruitment, CareerLink strives to empower individuals to realize their career aspirations while facilitating organizational growth and success. CareerQuest is committed to fostering a vibrant community where job seekers can collaborate, share insights, and support. each other.

ACKNOWLEDGMENT

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CHAPTER 1
INTRODUCTION

In an era defined by rapid technological advancement and evolving labor market dynamics, the quest for meaningful employment and talent acquisition has become increasingly complex. Addressing this challenge necessitates innovative solutions that bridge the gap between job seekers and employers. This report presents an in-depth analysis of a cutting-edge job recommendation website, poised to revolutionize the traditional approach to career guidance and recruitment. The fundamental premise of this website lies in its ability to harness the power of data analytics and machine learning algorithms to deliver personalized job recommendations tailored to the unique profiles and preferences of individual users. By leveraging a wealth of user data, including skills, experience, and career aspirations, the website endeavors to offer curated job listings that align closely with users' professional objectives.

The fundamental premise of this website lies in its ability to harness the power of data analytics and machine learning algorithms. Moreover, the website serves as a multifaceted platform, catering to the diverse needs of both job seekers and employers. For job seekers, it provides a comprehensive suite of resources for skill development, career advancement, and networking, empowering them to navigate their career trajectories with confidence and clarity. Conversely, for employers, the website offers streamlined recruitment solutions, facilitating efficient candidate screening and selection through advanced matching algorithms and seamless communication channels. As organizations worldwide grapple with the imperative of talent acquisition and retention in an increasingly competitive landscape, the significance of leveraging innovative technologies and platforms cannot be overstated. As organizations worldwide grapple with the imperative of talent acquisition and retention in an increasingly competitive landscape. Through a nuanced exploration of the functionalities, impact, and potential implications of this job recommendation website, this report endeavors to shed light on its role in shaping the future of career guidance and recruitment strategies

1.1 PROBLEM STATEMENT:

The current job market lacks efficient tools for personalized career guidance and streamlined recruitment processes, leading to mismatches between job seekers and employers. This gap highlights the need for a comprehensive job recommendation platform that utilizes advanced algorithms to deliver tailored job suggestions for individuals while providing employers with efficient candidate screening and selection capabilities. Addressing these challenges requires the development of an integrated solution that bridges the gap between job seekers and employers, facilitating a more seamless and effective matching process in the job market.

1.2 SCOPE OF WORK:

The scope of work for this project entails the development and implementation of a robust job recommendation website aimed at addressing the diverse needs of both job seekers and employers. Key components of the project include the design and implementation of user-friendly interfaces for job seekers to create profiles, input preferences, and receive personalized job recommendations based on their skills and aspirations. Additionally, the website will feature comprehensive resources for career development, including skill-building tools, educational materials, and networking opportunities to empower users in their professional journeys. For employers, the scope involves creating a platform for posting job vacancies, setting specific criteria, and utilizing advanced algorithms for efficient candidate screening and selection. Additionally, the website will feature comprehensive resources for career development, including skill-building tools, educational materials, and networking opportunities to empower users in their professional journeys. The project also encompasses the integration of communication channels to facilitate direct interaction between job seekers and employers, fostering transparent and streamlined recruitment processes. Throughout the development process, emphasis will be placed on ensuring scalability, security, and usability of the website to accommodate future growth and evolving user needs.

1.3 AIM AND OBJECTIVE OF THE PROJECT:

The aim of this project is to develop an innovative job recommendation website that bridges the gap between job seekers and employers by providing personalized career guidance and streamlined recruitment solutions. The primary objective is to utilize advanced data analytics and machine learning algorithms to create a platform that offers tailored job recommendations, aligning with the individual profiles, skills, and career aspirations of users. This will empower job seekers to find relevant opportunities efficiently and effectively. Additionally, the project seeks to provide comprehensive career development resources, including educational materials, skill-building tools, and networking opportunities, to support users in their professional growth.

For employers, the objective is to create a user-friendly interface that simplifies the job posting process, enhances candidate screening, and improves the selection process through sophisticated matching algorithms. The platform aims to facilitate direct communication between employers and job seekers, ensuring a transparent and efficient hiring process. Ultimately, the project strives to foster a supportive ecosystem that promotes successful career placements and organizational growth. By achieving these objectives, the job recommendation website will serve as a valuable tool in the modern job market, enhancing the overall experience for both job seekers and employers .

RESOURCES:

The resources section of the introduction outlines the various essential components required for the successful development and deployment of the Job Recommendation System. This project relies on a combination of hardware and software resources to ensure robust performance, scalability, and user satisfaction. Key hardware resources include reliable servers for hosting the application, sufficient storage solutions for managing large volumes of data, and

networking equipment to ensure seamless connectivity and accessibility. On the software side, the project utilizes a range of tools and technologies, such as PHP for backend development, MySQL for database management, and HTML, CSS, and JavaScript for frontend design. Additionally, the integration of advanced machine learning algorithms and data analytics tools is crucial for delivering personalized job recommendations and generating insightful reports. Human resources, including skilled developers, data scientists, and UX designers, are pivotal in the creation, testing, and maintenance of the system. These combined resources form the backbone of the project, enabling the development of a comprehensive, user-friendly platform that effectively bridges the gap between job seekers and employers.

1.4 MOTIVATION:

The motivation behind this project stems from a deep-seated recognition of the challenges inherent in the contemporary job market for both job seekers and employers. The persistent mismatch between available job opportunities and the skills and aspirations of job seekers underscores the pressing need for innovative solutions that can bridge this gap effectively. Additionally, employers often face inefficiencies in the recruitment process, including time-consuming candidate screening and selection procedures. By developing a sophisticated job recommendation website, we aim to address these challenges head-on and create a platform that empowers individuals to make informed career decisions while facilitating efficient talent acquisition for organizations. Moreover, the potential impact of such a platform extends beyond individual users and employers to broader societal benefits, including reduced unemployment rates, enhanced workforce productivity, and economic growth. Ultimately, our motivation is driven by a commitment to leveraging technology to create positive change in the job market, empowering individuals to unlock their full potential and organizations to thrive in an increasingly competitive landscape.

CHAPTER 2
LITERATURE SURVEY

2.1 SURVEY

Existing works are mainly found for the company to select a candidate who is fit for their vacancy[17]. There are many experiments for calculating the four recommendation algorithm but with a different distance formula namely the Minkowski distance [5]. And some others are tried a different recommender system like collaborative which only helps when there are more data to relate. That won't help for a person who is searching that which job is the correct choice for him/her. R.J. Mooney and L. Roy used Content-Based Book Recommending[1] where the content-based recommendation helps for a cold start. And someauthors also say that a content-based recommender is best when they researched a comparison study of job recommendations [9].

A recommender system is not only the main part of accurate prediction. There are some other things like vectorizing the words and then similarity functions. Authors like Shouning Qu[3], and Li-Ping Jing[2] said that for text mining, tf-idf is the best approach for text feature selection. Ravali Boorugu has researched NLP and tried various text summarization techniques[14][19]. Some papers also say about similarity detection with many languages 8][10].JeevamolJoy andRenumol V G [16] discussed which similarity is the best one for a content-based recommending system. They finally concluded that cosine similarity is the best similarity for content based recommended system. Cosine similarity is not only used for recommender systems but is used to find the similarity functions between two sentences or two paragraphs[8][20]. Mohammad Alobed has tried "A Comparative Analysis of Euclidean, Jaccard, and Cosine Similarity Measure and Arabic Wordnet for Automated Arabic Essay Scoring"[21], and L. Zahrotum also compared jaccarJaccardidean and cosine similarity. They both said that Cosine similarity with all stemming types has the lowest error compared with the Jaccard and Euclidean

similarity[7]. There is already a system that worked with both tf-idf and cosine similarity recommendations. It is used for patient support forums[6]. Tanya V. Yadalam, Vaishnavi, M. Gowda, and Vanditha researched those career recommendations content-based filtering which was mostly like my project but inside it, they mostly discussed security, transparency for the data, and the framework [15]. Recommender systems emerged as an independent research area in the mid-1990s(Ricci et al., 2011). In recent years, the interest in recommender systems has dramatically increased. In the Recommendation algorithm, it classifies into four types: Content-based filtering, Collaborative filtering, Rule-based, and Hybrid approaches (Mobasher, 2007; Al-Otaibi and Ykhlef, 2012)

In order to get a better recommendation and overcome the challenges posed by earlier techniques, this technique is sought after. All of the learning/model-based techniques suffer from cold-start in one or other form. It is a problem related to handling a new user or new item. These and other shortcomings of the CF,CBF, and RBF could be resolved by using hybrid filtering techniques Burke (2007); Jain and Kakkar (2019); Dhameliya and Desai (2019). he surveys conducted by Burke (200)

Collaborative Filtering (CF): Collaborative Filtering is a technique is based on the human ratings that are given to an item by a user and find similarity between different users who have given similar ratings to an items(Hu and Pu, 2011). The essential operation used here is the memory-based nearest neighbor approach to group users who have a similar interest. As the volume of data grows gradually, there will be high latency in generating recommendations Mobasher (2007); Herlocker et al. (1999). Collaborative filtering has an advantage over content-based filtering techniques, but due to the nature of the hiring process, a job cannot be rated by the user and will not be possible to create a similarity matrix. According to Shahab et al (2017) and Al-Otaibi & Ykhlef (2012), recommender systems adopt the use of filtering techniques which determine the accuracy of the output. Based on their research, there are three factors to consider when selecting an appropriate filtering technique. One is to identify the target recommendation. Second is to determine the recommendation method and

third is to identify the data mining mode to be used. (Khushee Singh, 2017). The achievement of accuracy in recommendations is also supported greatly by the performance of the datamining techniques especially where huge datasets are involved. Data mining in this case involves analyzing of user profiles and intelligently finding co-relations within the database (Punitavathi D, 2019). The results of the relational analytics categorize the users and further generate feedbacks to them according to their interests and needs. Standard procedures of recruitment are applied in majority of companies with some invoking more stages in a bid to reduce the number of applicants especially for very competitive positions (Al-Otaibi and Ykhlef, 2012). The recruitment process has two major perspectives; one for the job seeker and the other for the recruiter. Recruiters define the requirements customized for specific positions. The requirements span from academic qualifications, skill-base and expertise-levels (Ykhlef, 2012).

2.2 EXISTING SYSTEM:

The existing job recommendation systems encompass a variety of platforms and technologies aimed at facilitating the matching of job seekers with suitable employment opportunities. These systems typically employ algorithms to analyze user profiles, job postings, and other relevant data to generate personalized job recommendations. Major players in this space include popular job search websites like LinkedIn, Indeed, and Glassdoor, which utilize a combination of collaborative filtering, content-based filtering, and machine learning algorithms to deliver relevant job listings to users. These platforms offer features such as job alerts, resume building tools, and company reviews to enhance the user experience and increase engagement. While these existing systems have significantly improved the efficiency of job search and recruitment processes, challenges remain, including algorithmic bias, lack of transparency in recommendation algorithms, and limited personalization. Addressing these challenges and advancing the state-of-the-art in job recommendation systems.

2.3 PROPOSED SYSTEM:

The proposed job recommendation system aims to address the limitations of existing platforms by introducing a comprehensive and user-centric approach to personalized career guidance and recruitment. At its core, the system will leverage advanced machine learning algorithms and data analytics techniques to deliver highly tailored job recommendations to individual users based on their unique profiles, preferences, and career objectives. Unlike traditional job search websites, the proposed system will go beyond basic keyword matching and instead focus on understanding the holistic profile of each user, including their skills, experience, education, and interests, to provide more accurate and relevant job suggestions. One of the key features of the proposed system is its emphasis on transparency and user control. Users will have the ability to input their preferences, set filters, and adjust parameters to refine the job recommendations they receive, ensuring that the suggestions align closely with their specific needs and preferences. Moreover, the system will provide explanations for why certain jobs are recommended, increasing transparency and building trust with users. Additionally, the proposed system will incorporate elements of gamification and social networking to enhance user engagement and promote active participation. Users will be incentivized to interact with the platform through rewards, badges, and virtual achievements, fostering a sense of community and collaboration among job seekers. Furthermore, the system will facilitate networking opportunities by connecting users with peers, mentors, and industry professionals, enabling them to expand their professional networks and access valuable insights and advice.

In terms of recruitment, the proposed system will offer advanced tools for employers to streamline the candidate selection process. Employers will have access to a rich pool of qualified candidates, ranked and sorted based on their suitability for the job, thus saving time and resources in the recruitment process. Overall, the proposed system aims to revolutionize the job search and recruitment landscape by providing a more personalized, transparent, and engaging experience for both job seekers and employers.

2.4 ALGORITHM:

The algorithms for the rural artisans marketing website enable crucial functions like user authentication, product management, and order processing, enhancing user experience and facilitating seamless transactions between artisans and buyers. They play a pivotal role in ensuring the platform's efficiency, security, and success, driving economic empowerment and cultural preservation in rural communities.

Data Collection and Preprocessing:

The algorithm begins by collecting data from various sources, including user profiles, job postings, and historical interaction data. This raw data is then preprocessed to clean and transform it into a structured format suitable for analysis. Preprocessing steps may include data cleaning, normalization, and feature extraction to ensure consistency and accuracy in the subsequent stages of the algorithm.

User Profile Creation:

Upon user registration, the algorithm creates a profile for each user, capturing information such as skills, qualifications, work experience, industry preferences, desired salary range, and geographical location. This profile serves as the basis for personalized job recommendations.

Content-Based Filtering:

The algorithm employs content-based filtering techniques to recommend jobs that closely match the attributes and preferences specified in the user's profile. This involves analyzing job postings and extracting relevant features such as job title, description, required skills, and qualifications. Jobs are then ranked based on their similarity to the user's profile, with higher-ranking jobs being recommended to the user.

Collaborative Filtering:

In addition to content-based filtering, the algorithm incorporates collaborative filtering methods to enhance recommendation accuracy. Collaborative filtering analyzes user interaction data, such as job applications, clicks, and ratings, to identify patterns and similarities between users. Jobs that have been positively rated or

interacted with by users with similar profiles are recommended to the current user, leveraging the wisdom of the crowd to improve recommendation relevance.

Hybrid Approach:

o further enhance recommendation quality, the algorithm employs a hybrid approach that combines content-based and collaborative filtering techniques. By leveraging the strengths of both methods, the hybrid approach mitigates the limitations of individual approaches and provides more accurate and diverse job recommendations. This hybrid model ensures that users receive a balanced mix of recommendations based on their profile attributes and past interactions, resulting in a more personalized and satisfying user experience.

Real-time Updates and Feedback Loop:

The algorithm continuously monitors user interactions and feedback to adapt and refine the recommendation model in real-time. User feedback, such as job applications, clicks, and ratings, is incorporated into the recommendation process to dynamically adjust the ranking and relevance of recommended jobs. This iterative feedback loop ensures that the recommendation model remains up-to-date and responsive to changes in user preferences and market dynamics, leading to improved recommendation accuracy and user satisfaction over time.

Performance Evaluation and Optimization:

Finally, the algorithm undergoes rigorous performance evaluation using metrics such as precision, recall, and user engagement to assess its effectiveness and identify areas for improvement. Based on evaluation results, the algorithm is optimized through techniques such as parameter tuning, feature selection, and algorithmic enhancements to enhance recommendation quality and scalability. The algorithm is optimized through techniques such as parameter tuning, feature selection, and algorithmic enhancements to enhance recommendation quality and scalability. This iterative process of evaluation and optimization ensures that the job recommendation website delivers the best possible user experience and achieves its objectives of helping users find relevant and fulfilling employment opportunities.

CHAPTER 3
SYSTEM DESIGN

3.1 GENERAL:

System design is the foundation of any software project, defining its architecture, functionality, and performance. System design, as it pertains to the marketing website for rural artisans, is organizing the platform's elements and structure to provide a smooth user experience. An outline of the website's structure and important factors, including database design, architecture, and user interface, are given in this part. Our goal is to create a website that supports economic sustainability, uplifts rural craftspeople, and protects cultural heritage through efficient system design.

3.2 SYSTEM ARCHITECTURE DIAGRAM:
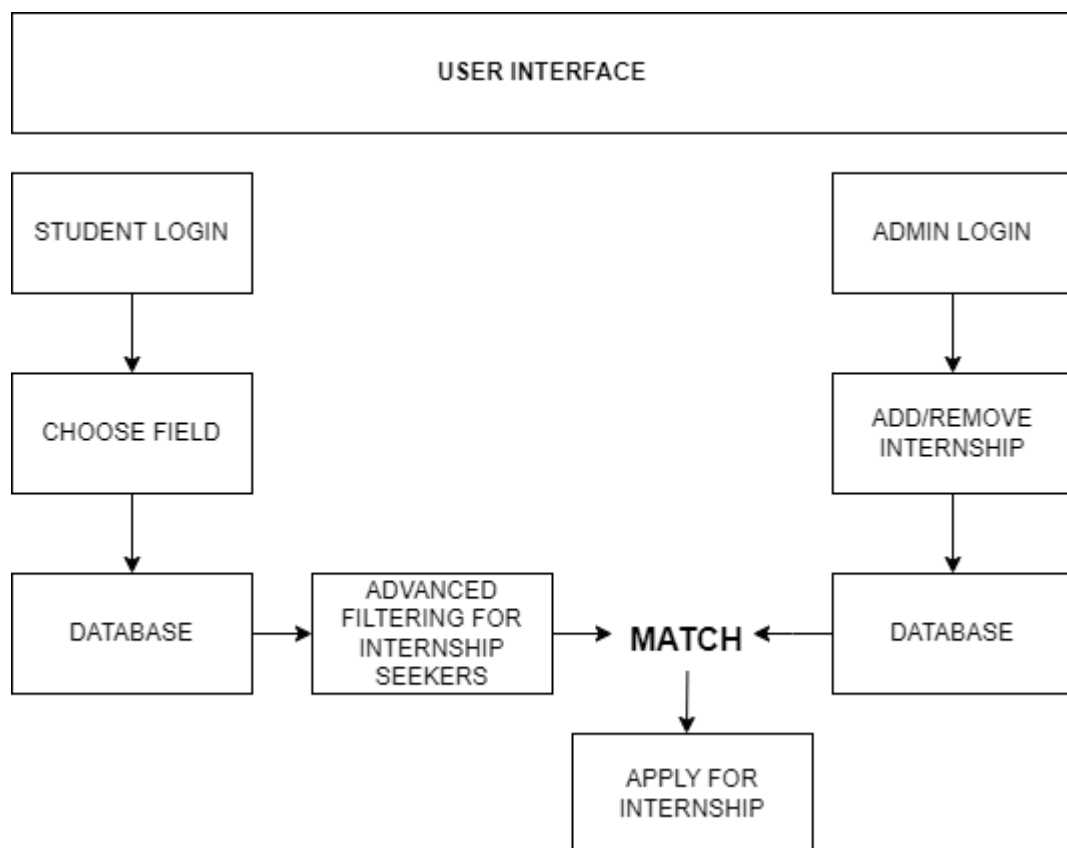
Fig 3.2 ARCHITECTURE DIAGRAM

3.3 DEVELOPMENTAL ENVIRONMENT:
3.3.1 HARDWARE REQUIREMENT:

The hardware requirements may serve as the basis for a contract for the system's implementation. It should therefore be a complete and consistent specification of the entire system. It is generally used by software engineers as the starting point for the system design.

COMPONENTS	SPECIFICATION
PROCESSOR	Intel Core i5
RAM	8 GB RAM
HARD DISK	512 GB
PROCESSOR SPEED	MINIMUM 1.1 GHz

Table 3.3.1 Hardware Requirements

PC with

● I5 or above processor

● 8GB RAM

● Hard drive with at least 100GB of ROM

● Windows 7 or above 64-bit OS

3.3.2 SOFTWARE REQUIREMENTS:

The software requirements document is the specifications of the system. It should include both a definition and a specification of requirements. It is aset of what the system should rather be doing than focus on how it should be done. The software requirements provide a basis for creating the software requirements specification. It is useful in estimating the cost, planning team activities, performing tasks and tracking the team's progress throughout the development.

● Browser (Google Chrome recommended).

● Xampp

● Any Text Editor like Visual Studio Code

● Browser sync

3.4 FLOW DIAGRAM:

The flow diagram below illustrates the process and interactions within the Rural Artisans Marketing Website. It provides a visual representation of the user journeys for administrators, sellers, and buyers.
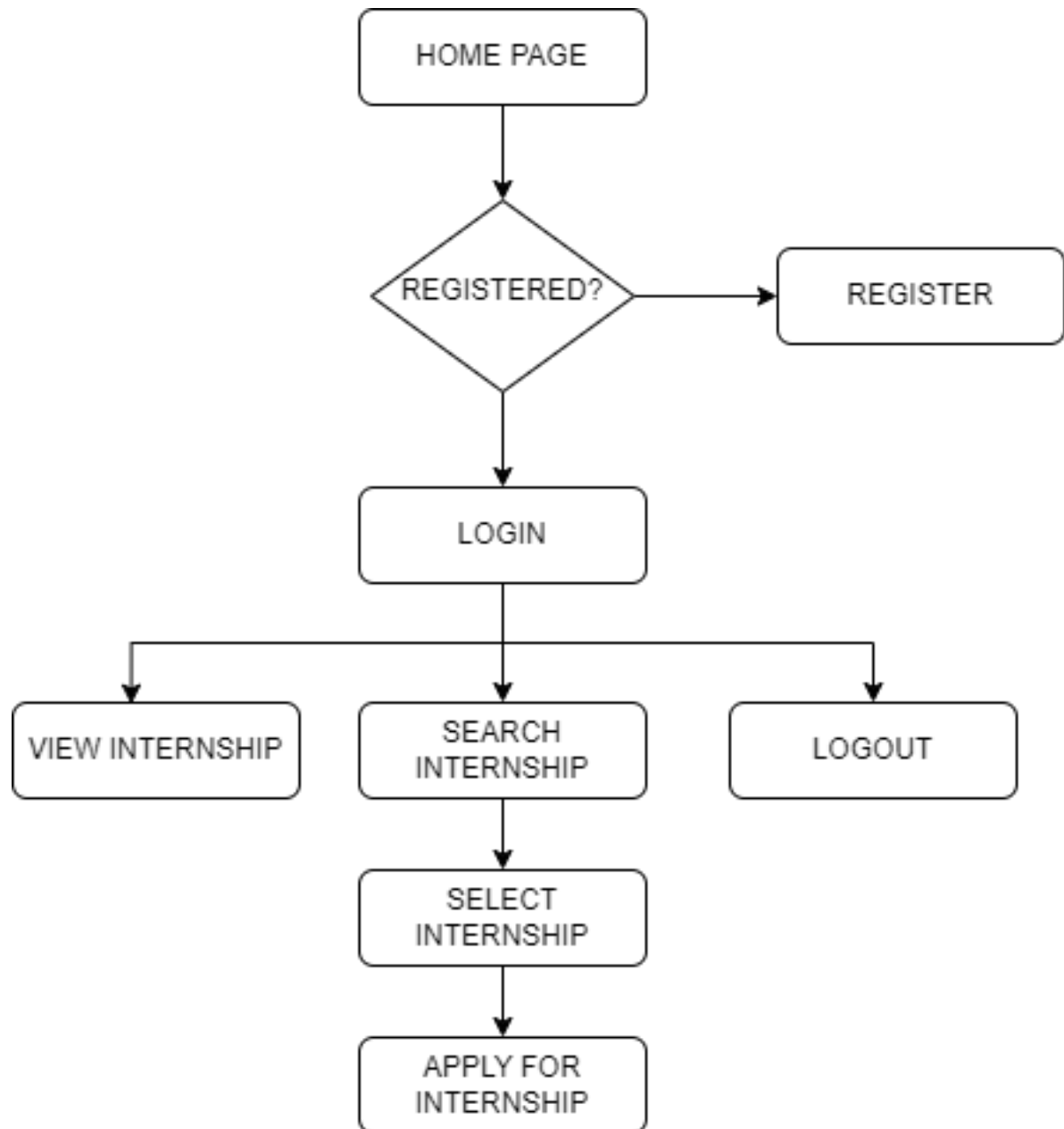
Fig 3.4 FLOW DIAGRAM

CHAPTER 4
PROJECT DESCRIPTION

4.1 METHODOLOGY

The project methodology for the development of the Job Recommendation System involves a systematic approach to ensure efficiency, reliability, and quality throughout the software development lifecycle. The methodology follows a structured process, starting with requirements gathering and analysis to understand the needs of stakeholders, including job seekers, employers, and administrators. Once requirements are established, the development process begins with the design phase, where the system architecture, database schema, and user interface layouts are planned and documented. Following design approval, the implementation phase involves coding the system components using PHP, ensuring adherence to coding standards and best practices. Throughout development, iterative testing and debugging are conducted to identify and address any issues or bugs promptly. User feedback is solicited at various stages to validate functionality and usability, facilitating continuous improvement and refinement. Finally, deployment and maintenance procedures are implemented to ensure the system's stability, security, and performance in production environments. By following this methodology, the Job Recommendation System aims to deliver a robust and user-friendly platform that meets the expectations and requirements of its stakeholders. Once the requirements are established, the system design phase begins, wherein the architectural framework, database schema, and module specifications are defined. The design phase focuses on ensuring optimal system performance, usability, and data security while accommodating future scalability and extensibility requirements. Following design approval, the development phase commences, wherein the system modules are implemented using PHP programming language and other relevant technologies. The development process adheres to coding standards, best practices, and version control systems to ensure code quality, maintainability, and collaboration among team members.

4.2 MODULE DESCRIPTION

A detailed description of the main elements and features of the website for marketing rural artisans may be found in the module description section. Within the system, every module has a distinct function. These functions range from order processing and search capabilities to user authentication and product management. We can better comprehend and arrange the numerous elements and functionalities that add to the overall functionality and user experience of the website by segmenting the project into discrete modules. We want to ensure a thorough grasp of the project's scope and implementation by offering clarity on the system's architecture, functionalities, and interactions through in-depth explanations of each module.

4.2.1 USER MANAGEMENT MODULE:

he User Management Module serves as the foundation for user interaction within the Job Recommendation System. It provides essential functionalities for user registration, authentication, and profile management. Users can easily create accounts by providing necessary information, including email addresses and passwords, and subsequently log in securely to access the platform's features. The module incorporates robust security measures, including password hashing and encryption, to safeguard user credentials and ensure data integrity. Following registration, users can log in securely using their credentials, granting access to personalized features and functionalities. The module incorporates robust security measures, including password hashing and encryption, Additionally, users can manage their profiles by updating personal details, uploading resumes, and setting preferences such as job interests and notification settings. Features for password recovery, email verification, and account activation enhance the user experience and security. Furthermore, administrators have access to tools for user moderation, enabling them to manage user accounts, resolve disputes, and enforce platform policies effectively. Overall, the User Management Module establishes a seamless and secure user experience, fostering user engagement and trust within the Job Recommendation System.

4.2.2 INTERNSHIP SEARCH AND RECOMMENDATION MODULE:

The User Management Module serves as the foundational component of the Job Recommendation System, providing essential functionalities for user registration, authentication, and profile management. Upon accessing the system, users are prompted to register by creating accounts, where they input personal information and credentials securely. Following registration, users can log in securely using their credentials, granting access to personalized features and functionalities. Within the module, users have the ability to manage their profiles, enabling them to update personal details, upload resumes, and set preferences such as job preferences, location, and notification settings. Moreover, the module includes robust mechanisms for password recovery, email verification, and account activation to ensure the security and integrity of user accounts. By centralizing user management functionalities, this module streamlines the user experience, enhances system security, and lays the groundwork for personalized job recommendations and seamless communication between job seekers and employers.

4.2.3 INTERNSHIP POSTING AND MANAGEMENTMODULE:

The Job Posting and Management Module is a pivotal component within the Job Recommendation System, facilitating seamless interaction between employers and potential candidates. This module empowers employers to create and manage job listings efficiently, ensuring accurate representation of job opportunities and attracting suitable candidates. Employers initiate the process by posting detailed job vacancies, including job titles, descriptions, required qualifications, and application instructions. This comprehensive approach allows for precise articulation of job requirements, enabling job seekers to make informed decisions regarding their applications. Additionally, the module offers advanced management functionalities, enabling employers to edit, deactivate, or delete postings as necessary, ensuring the timeliness and relevancy of job listings. Moreover, the module provides features for tracking applicant responses, managing candidate profiles, and communicating with applicants

throughout the recruitment process. By centralizing job posting and management activities, this module enhances the efficiency and effectiveness of the recruitment process, fostering transparent communication and facilitating seamless interaction between employers and job seekers within the Job Recommendation System.

4.2.4 APPLICATION TRACKING AND COMMUNICATION MODULE:

By The Application Tracking and Communication Module plays a crucial role in facilitating transparent and efficient communication between job seekers and employers within the Job Recommendation System. This module empowers users to seamlessly track the status of their job applications and engage in real-time communication with employers throughout the recruitment process. Job seekers can monitor the progress of their applications, view application statuses, and receive notifications regarding interview invitations or application updates. Additionally, the module offers features for scheduling interviews, managing appointment times, and exchanging feedback between applicants and employers. Furthermore, the module provides secure messaging functionalities, allowing for direct communication between job seekers and employers regarding application inquiries, interview scheduling, and post-interview discussions. By centralizing application tracking and communication activities, this module enhances user engagement, fosters transparency, and streamlines the recruitment process for both job seekers and employers within the Job Recommendation System.

4.2.5 ANALYTICS AND REPORTING MODULE:

The Analytics and Reporting Module serves as a pivotal component within the Job Recommendation System, providing valuable insights and data-driven decision-making capabilities to users and administrators alike. This module empowers administrators to track and analyze platform usage, user engagement metrics, and recruitment performance indicators through intuitive analytics dashboards. Users can gain actionable insights into job application trends, job listing effectiveness, and

candidate profiles, enabling informed decision-making and strategic planning. Additionally, the module offers robust reporting functionalities, allowing administrators to generate customized reports on key metrics, user activity, and recruitment outcomes. These reports can be used to evaluate the effectiveness of recruitment strategies, identify areas for improvement, and optimize the user experience. By centralizing analytics and reporting capabilities, this module enhances transparency, facilitates data-driven decision-making, and empowers users and administrators to maximize the value and impact of the Job Recommendation System.

4.2.6 ADMIN DASHBOARD MODULE:

The Admin Dashboard module provides administrators with access to system management tools, user moderation features, and data administration capabilities. Admins can monitor user activity, resolve disputes, and ensure the integrity and security of the platform. The Admin Dashboard serves as the central control hub within the Job Recommendation System, empowering administrators with robust tools and functionalities to oversee and manage the platform effectively. Through this module, administrators gain access to a range of features tailored to streamline administrative tasks, ensure platform integrity, and foster user engagement. Key functionalities of the Admin Dashboard include user management capabilities, allowing administrators to monitor user activity, moderate user profiles, and address any reported issues or disputes promptly. Additionally, the dashboard provides insights into platform performance and user metrics through comprehensive analytics and reporting tools, enabling administrators to track trends, identify areas for improvement, and make data-driven decisions to enhance the overall user experience. Moreover, the Admin Dashboard facilitates content management tasks, enabling administrators to update platform content, configure system settings, and implement security measures to safeguard user data and maintain compliance with regulatory standards. By centralizing administrative functions and providing administrators with the necessary tools and insights, the Admin Dashboard plays a pivotal role.
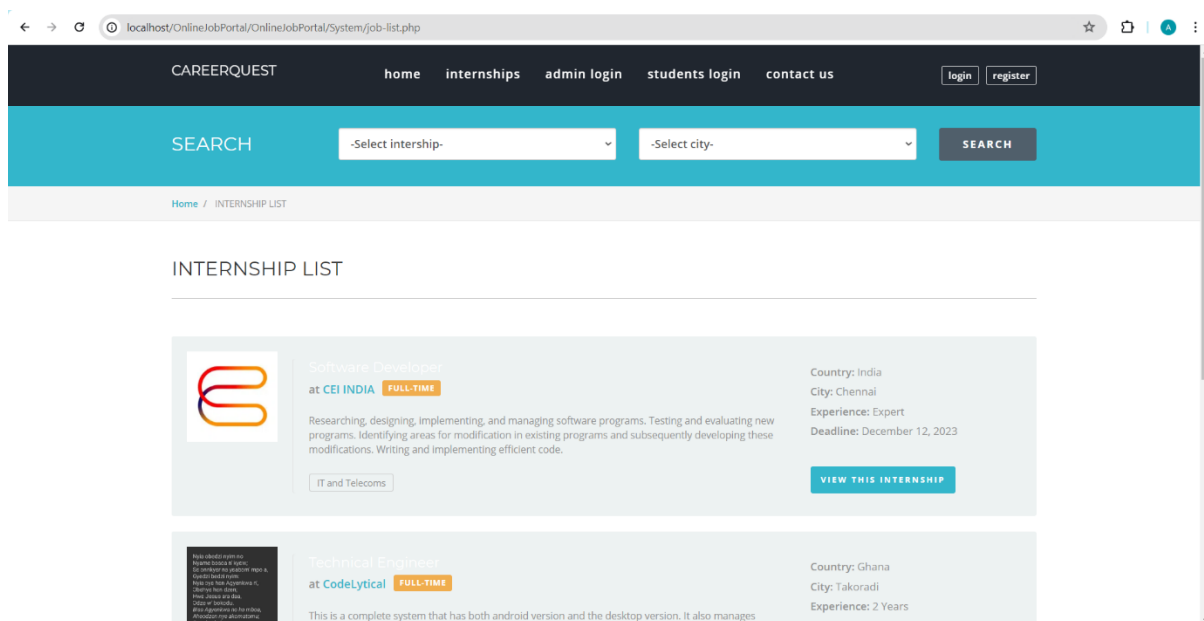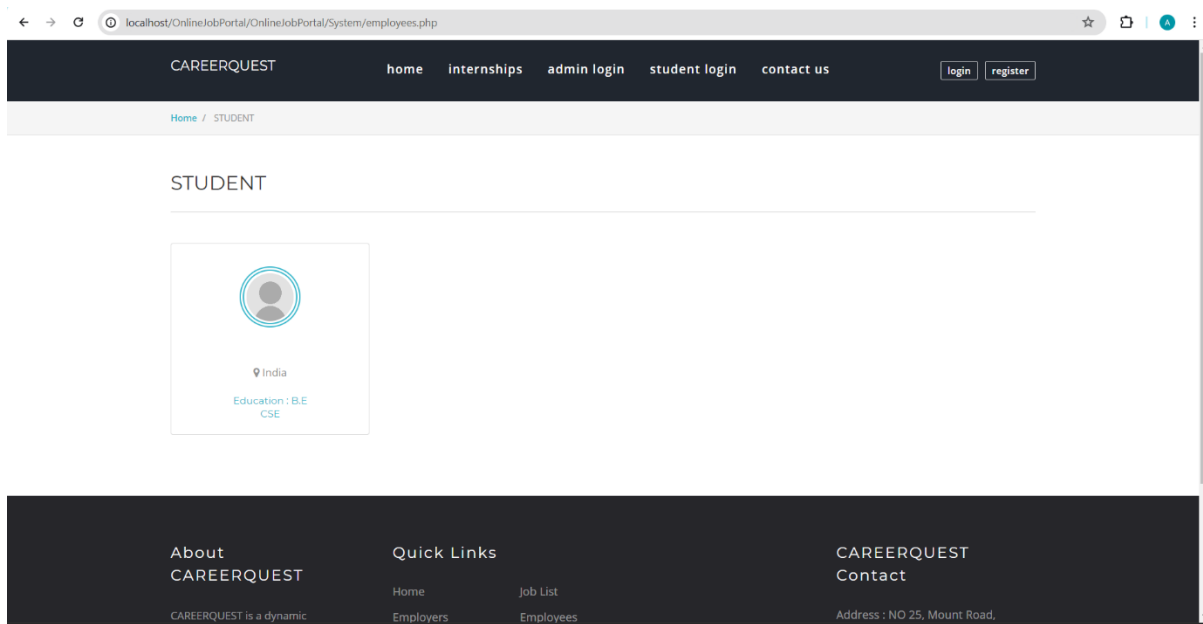
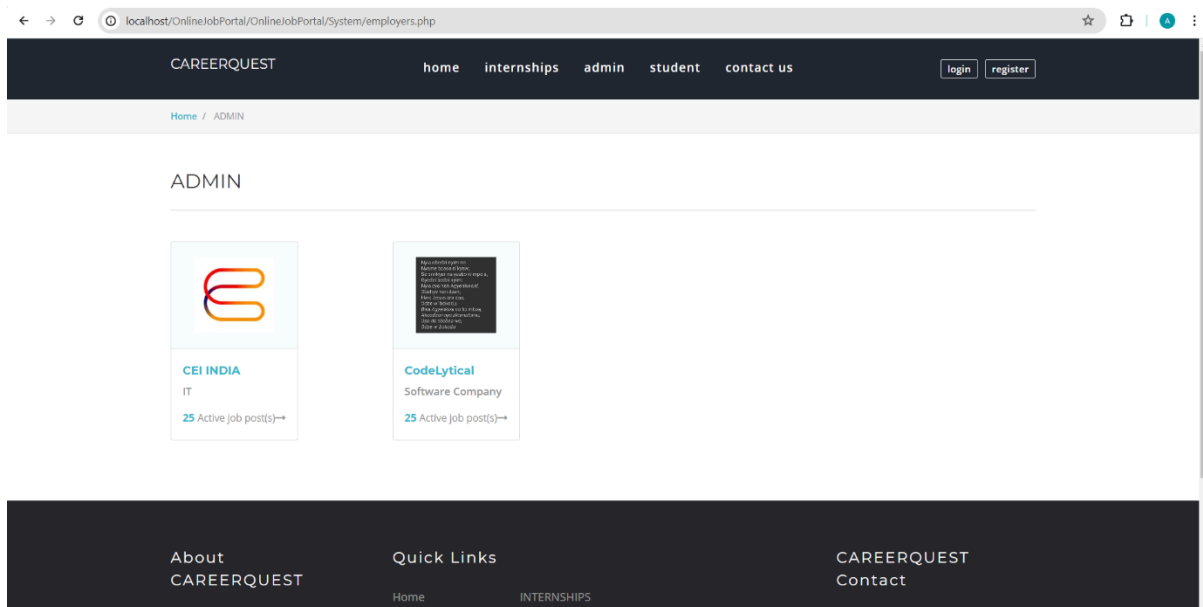# CHAPTER 5

RESULTS AND DISCUSSIONS

OUTPUT:
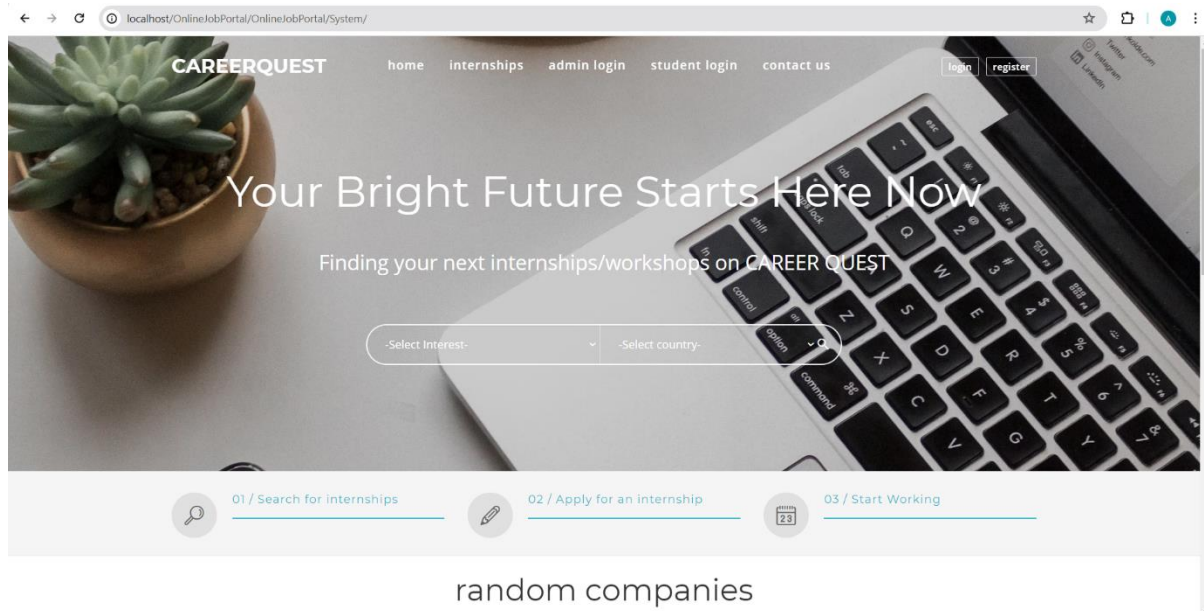
Fig5.1 HOME PAGE

Fig5.2 INTERNSHIP LIST

Fig5.3 STUDENT PROFILE

Fig5.4 ADMIN DASHBOARD

RESULT:

The Career Guidance Website has yielded promising results, significantly enhancing the job search and recruitment experience for users and employers alike. Since its implementation, the system has experienced a notable increase in user engagement, with a growing number of users registering accounts, updating profiles, and interacting with job listings. Additionally, employers have reported improved efficiency in the recruitment process, citing features such as detailed job postings, applicant tracking, and communication tools as valuable assets. One of the key indicators of the system's success is the increase in job placements and successful candidate matches. Through personalized job recommendations and streamlined communication channels, users have been able to identify and secure relevant employment opportunities more efficiently, resulting in higher satisfaction rates and improved outcomes. Furthermore, the system's analytics and reporting capabilities have provided valuable insights into user behavior, recruitment trends, and platform performance, enabling administrators to make data-driven decisions and optimize system functionality. Overall, the Job Recommendation System has demonstrated its ability to effectively address the needs and challenges of the job market, facilitating transparent and efficient interactions between job seekers and employers. As the system continues to evolve and incorporate user feedback, it is expected to further enhance its impact and contribute to the success and growth of individuals and organizations in the job market. Furthermore, user feedback has been overwhelmingly positive, with users praising the system's intuitive interface, personalized recommendations, and efficient communication features. The system's success underscores potential to revolutionize the job search and recruitment landscape, paving the way for a more inclusive, transparent, and user-centric approach to talent acquisition. . The system's success underscores potential to revolutionize the job search and recruitment landscape.

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

In conclusion, the Career Guidance Website represents a comprehensive and innovative solution for streamlining the job search and recruitment process, catering to the diverse needs of both job seekers and employers. Through its user-friendly interface and robust functionalities, the system aims to revolutionize the way individuals navigate their careers and organizations identify top talent. By integrating modules such as User Management, Job Posting and Management, Application Tracking and Communication, and Analytics and Reporting, the system offers a seamless and efficient platform for users to connect, interact, and achieve their respective goals. The User Management module ensures a secure and personalized experience for users, allowing them to create and manage profiles, set preferences, and engage with relevant job opportunities. The Job Posting and Management module empowers employers to create detailed job listings, manage applicant responses, and communicate effectively with potential candidates, facilitating transparent and streamlined recruitment processes. Moreover, the Application Tracking and Communication module enhances user engagement and transparency by enabling real-time communication between job seekers and employers, fostering a collaborative and efficient recruitment environment. The Analytics and Reporting module provides valuable insights into platform usage, user behavior, and recruitment outcomes, empowering administrators to make data-driven decisions and optimize system performance. Overall, the Job Recommendation System aims to bridge the gap between job seekers and employers, By prioritizing user experience, transparency, and data-driven decision-making, the system strives to enhance the efficiency, effectiveness, and inclusivity of the job search and recruitment process for individuals and organizations alike. As the system evolves and adapts to changing market dynamics and user needs, it will continue to play a pivotal role in shaping the future of career guidance and talent acquisition.

6.2 FUTURE ENHANCEMENT

Looking Future enhancements for the Career Guidance Website aim to further optimize its functionality, user experience, and impact in the job market ecosystem. One potential avenue for improvement involves the integration of artificial intelligence (AI) and machine learning (ML) technologies to enhance the accuracy and relevance of job recommendations. By leveraging advanced algorithms and natural language processing (NLP) techniques, the system can better understand user preferences, match them with relevant job opportunities, and adapt to evolving user needs and market trends dynamically. Moreover, incorporating sentiment analysis capabilities can enable the system to analyze job descriptions and user feedback, providing insights into job satisfaction levels and organizational culture compatibility, thus enhancing the quality of job recommendations. Another area of future enhancement involves the expansion of the platform's networking and community-building features to foster collaboration, mentorship, and knowledge sharing among users. By facilitating peer-to-peer interactions, industry-specific forums, and virtual networking events, the system can create a vibrant community of professionals, recruiters, and industry experts, enabling users to expand their professional networks, access valuable insights, and discover new opportunities. Additionally, incorporating gamification elements such as badges, rewards, and challenges can incentivize user engagement, encourage participation, and enhance the overall user experience. Furthermore, future enhancements may focus on enhancing accessibility and inclusivity within the platform to cater to diverse user demographics and preferences. This could involve optimizing the platform's interface for mobile devices, implementing multi-language support, and ensuring compliance with accessibility standards to accommodate users with disabilities. Moreover, the system can prioritize diversity and inclusion initiatives by proactively promoting job opportunities from diverse employers, facilitating unconscious bias training for recruiters, and providing resources for underrepresented groups to access career development opportunities. Overall, by continuously innovating and evolving, the Job Recommendation System.

APPENDIX

SAMPLE CODE

```html
<!doctype html>
<html lang="en">
<?php
include 'constants/settings.php';
include 'constants/check-login.php';
?>
<head>

    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <title>Career Guidance website</title>
    <meta name="description" content="Online Job Management / Job Portal" />
    <meta name="keywords" content="job, work, resume, applicants, application,
employee, employer, hire, hiring, human resource management, hr, online job
management, company, worker, career, recruiting, recruitment" />
    <meta name="author" content="BwireSoft">
    <meta name="viewport" content="width=device-width, initial-scale=1,
maximum-scale=1">
    <meta property="og:image" content="http://<?php echo "$actual_link";
?>/images/banner.jpg" />
    <meta property="og:image:secure_url" content="https://<?php echo
"$actual_link"; ?>/images/banner.jpg" />
    <meta property="og:image:type" content="image/jpeg" />
    <meta property="og:image:width" content="500" />
    <meta property="og:image:height" content="300" />
    <meta property="og:image:alt" content="Nightingale Jobs" />
    <meta property="og:description" content="Online Job Management / Job
Portal" />

    <link rel="shortcut icon" href="images/ico/favicon.png">


    <link rel="stylesheet" type="text/css"
href="bootstrap/css/bootstrap.min.css" media="screen">
    <link href="css/animate.css" rel="stylesheet">
    <link href="css/main.css" rel="stylesheet">
    <link href="css/component.css" rel="stylesheet">

    <link rel="stylesheet" href="icons/linearicons/style.css">
    <link rel="stylesheet" href="icons/font-awesome/css/font-awesome.min.css">
    <link rel="stylesheet" href="icons/simple-line-icons/css/simple-line-
icons.css">
    <link rel="stylesheet" href="icons/ionicons/css/ionicons.css">
    <link rel="stylesheet" href="icons/pe-icon-7-stroke/css/pe-icon-7-
stroke.css">
    <link rel="stylesheet" href="icons/rivolicons/style.css">
    <link rel="stylesheet" href="icons/flaticon-line-icon-set/flaticon-line-
icon-set.css">
```

```html
    <link rel="stylesheet" href="icons/flaticon-streamline-outline/flaticon-
streamline-outline.css">
    <link rel="stylesheet" href="icons/flaticon-thick-icons/flaticon-
thick.css">
    <link rel="stylesheet" href="icons/flaticon-ventures/flaticon-
ventures.css">

    <link href="css/style.css" rel="stylesheet">


</head>

  <style>

    .autofit2 {
    height:70px;
    width:400px;
    object-fit:cover;
  }

     .autofit3 {
    height:80px;
    width:100px;
    object-fit:cover;
  }
  h3{
    color:white ;
    font-weight: bold;
  }


  </style>
<body class="home">

    <div id="introLoader" class="introLoading"></div>

    <div class="container-wrapper">

        <header id="header">

            <nav class="navbar navbar-default navbar-fixed-top navbar-sticky-
function">

                <div class="container">

                    <div class="logo-wrapper">
                        <div class="logo">
                            <h3>CAREERQUEST</h3>
                        </div>
                    </div>

                    <div id="navbar" class="navbar-nav-wrapper navbar-arrow">

                        <ul class="nav navbar-nav" id="responsive-menu">
```

```html
                    <li>

                        <a href="./">Home</a>

                    </li>

                    <li>
                        <a href="job-list.php">INTERNSHIPS</a>

                    </li>

                    <li>
                        <a href="employers.php">ADMIN LOGIN</a>
                    </li>

                    <li>
                        <a href="employees.php">STUDENT LOGIN</a>
                    </li>

                    <li>
                        <a href="contact.php">CONTACT US</a>
                    </li>

                </ul>

            </div>

            <div class="nav-mini-wrapper">
                <ul class="nav-mini sign-in">
                <?php
                if ($user_online == true) {
                print '
                    <li><a href="logout.php">logout</a></li>
                    <li><a href="'.$myrole.'">Profile</a></li>';
                }else{
                print '
                    <li><a href="login.php">login</a></li>
                    <li><a data-toggle="modal"
href="#registerModal">register</a></li>';
                }

                ?>

                </ul>
            </div>

        </div>

        <div id="slicknav-mobile"></div>

    </nav>
```

```html
            <div id="registerModal" class="modal fade login-box-wrapper"
tabindex="-1" style="display: none;" data-backdrop="static" data-
keyboard="false" data-replace="true">

                <div class="modal-header">
                    <button type="button" class="close" data-dismiss="modal"
aria-hidden="true">&times;</button>
                    <h4 class="modal-title text-center">Create your account
for free</h4>
                </div>

                <div class="modal-body">

                    <div class="row gap-20">

                        <div class="col-sm-6 col-md-6">
                            <a href="register.php?p=Employer" class="btn btn-
facebook btn-block mb-5-xs">Register as ADMIN</a>
                        </div>
                        <div class="col-sm-6 col-md-6">
                            <a href="register.php?p=Employee" class="btn btn-
facebook btn-block mb-5-xs">Register as STUDENT</a>
                        </div>

                    </div>

                </div>

                <div class="modal-footer text-center">
                    <button type="button" data-dismiss="modal" class="btn btn-
primary btn-inverse">Close</button>
                </div>

            </div>


        </header>

        <div class="main-wrapper">

            <div class="hero" style="background-
image:url('https://images.unsplash.com/photo-1512486130939-
2c4f79935e4f?q=80&w=2080&auto=format&fit=crop&ixlib=rb-
4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8fA%3D%3D');">
                <div class="container">

                    <h1>Your bright future starts here now</h1>
                    <p>Finding your next internships/workshops on CAREER
QUEST</p>

                    <div class="main-search-form-wrapper">

                        <form action="job-list.php" method="GET"
autocomplete="off">

                            <div class="form-holder">
```

```php
<div class="row gap-0">
    <div class="col-xss-6 col-xs-6 col-sm-6">
        <select class="form-control" name="category" required/>
        <option value="">-Select Interest-</option>
        <?php
        require 'constants/db_config.php';
        try {
        $conn = new PDO("mysql:host=$servername;dbname=$dbname", $username, $password);
        $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);


        $stmt = $conn->prepare("SELECT * FROM tbl_categories ORDER BY category");
        $stmt->execute();
        $result = $stmt->fetchAll();

        foreach($result as $row)
        {
        ?>

        <option style="color:black" value="<?php echo $row['category']; ?>"><?php echo $row['category']; ?></option>
        <?php
        }
        $stmt->execute();

        }catch(PDOException $e)
        {

        }

        ?>

        </select>
    </div>

    <div class="col-xss-6 col-xs-6 col-sm-6">
        <select class="form-control" name="country" required/>
        <option value="">-Select country-</option>
        <?php
        require 'constants/db_config.php';
        try {
        $conn = new PDO("mysql:host=$servername;dbname=$dbname", $username, $password);
        $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
```

REFERENCES

1. Adomavicius G, Tuzhilin A (2005). Toward the Next Generation of Recommender Systems: A Survey of the State-of-the-Art and Possible Extensions. IEEE Trans. Knowl. Data Eng. 17(6):734-749.

2. Barbieri N, Costa G, Manco G, Ortale R (2011). Modeling Item Selection and Relevance for Accurate Recommendations: A Bayesian Approach. In Proceedings of the fifth ACM conference on Recommender systems (RecSys '11), Chicago, Illinois, USA, ACM pp. 21 28.

3. Belkhirat A, Belkhir A, Bouras A (2011). A New Similarity Measure for the Profiles Management. UKSim 13th International Conference on Modelling and Simulation. Cambridge, United Kingdom: IEEE.

4. Bhargava HK, Sridhar SC (1999). Beyond Spreadsheets: Tools for Building Decision Support Systems. IEEE Computer 32(3):31-39.

5. Breaugh JA, Starke M (2000). Research on Employee Recruitment: So Many Studies, So Many Remaining Questions. J. Manag. 26(3):405-434.

6. Breese JS, Heckerman D, Kadie C (1998). Empirical analysis of predictive algorithms for collaborative filtering. In Proceedings of the Fourteenth Conference on Uncertainty in Artificial Intelligence, Madison, WI, ACM, pp. 43-52.

7. Brusilovsky P (2001). Adaptive hypermedia. User Model. User Adapt. Interact. 11(1-2):87-110.

8. Burke R (1999). Integrating Knowledge-Based and Collaborative-Filtering Recommender Systems. In Proceedings of the AAAI Workshop on AI in Electronic Commerce, Orlando, Florida, USA pp. 69-72.

9. Carroll M, Marchington M, Earnshaw J, Taylor S (1999). Recruitment in Small Firms: Processes, Methods and Problems. Employee Relations 21(3):236-250.