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Enhanced Empowering Futures through Online Job Portal

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Abstract: ***This research aims to develop a job web portal for the students in the Faculty of Computer Science and Information Technology. The main aims of this portal are to connect with industries and act as an online recruitment tool to support students in finding the right IT job after graduation. Furthermore, this system enhances the understanding of the concept and importance of the job portal for students in universities. A survey was conducted to identify the students' problems with the existing portal of the faculty and to gather their requirements, which can be incorporated into the portal to be developed.***
Keywords: Job search , Job listings , Job openings , Professional networking , Recruitment platform , Job application , Interview preparation , Skill assessment , Part-time /Full-time employment , Job alerts , Company profiles.

I. INTRODUCTION

This paper examines the role of lifelong learning in counteracting skill depreciation and obsolescence. We differentiate between occupations with more hard skills versus more soft skills and draw on representative job advertisement data that contain machine-learning categorized skill requirements and cover the Swiss job market in great detail across occupations (from 1950 to 2019). We examine lifelong learning effects for "harder" versus "softer" occupations, thereby analyzing the role of training in counteracting skill depreciation in occupations that are differently affected by skill depreciation.[1].

Many people are waiting for organizations that share their commitment online through job application portals etc (Boğan et al., 2020). As a result, advertising statements emphasizing a firm's commitment to attracting young people have resulted in increased use of job application portals, attracting more people for jobs (Guzzo et al., 2022). Candidates claimed that they use a job application portal for recruiting, the original purpose of creating a job application portal was to search for jobs.[2].

This leads to deadlines and hence important opportunities being missed. Through this research paper, the aim is to automate this process to eliminate this problem.

To achieve this, Puppeteer and Representational State Transfer (REST) APIs for web crawling have been used. A hybrid system of Content-Based Filtering and Collaborative Filtering is implemented to recommend these jobs. The intention is to aggregate and recommend appropriate jobs to job seekers, especially in the engineering domain.[3].

Keeping track of various appropriate job openings in top industry names has become increasingly troublesome. This leads to deadlines and hence important opportunities being missed. Through this research paper, the aim is to automate this process to eliminate this problem.

To achieve this, Puppeteer and Representational State Transfer (REST) APIs for web crawling have been used. A hybrid system of Content-Based Filtering and Collaborative Filtering is implemented to recommend these jobs. The intention is to aggregate and recommend appropriate jobs to job seekers, especially in the engineering domain. The entire process of accessing numerous company websites hoping to find a relevant job opening listed on their career portals is simplified.[4]

In today's highly competitive job market, it is becoming increasingly important for companies to hire employees who are best fit for a job and to ensure they retain these employees in the long run. Studies have shown that employees who find their job meaningful and satisfying are generally more productive and less likely to leave the job. Human Resource professionals therefore need to ensure that proper screening of candidates is conducted during the recruitment process and that they hire the best fit candidate for a job.[5].

II. LITERATURE SURVEY

According to FHA. Shibly.et al., 2023 During the COVID-19 pandemic, online activities have become essential in daily life. However, electronic recruitment has seen an increase in fake job postings, with scammers aiming to obtain personal information for fraudulent purposes. Many companies opt for online job postings to reach a broader audience, but this also opens the door to potential scams. Detecting fraudulent job postings is crucial to protect individuals from scams and safeguard a company's reputation.

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Automated tools are needed to identify and report fake job postings effectively. Machine learning algorithms have been deployed to detect fraudulent posts, but their performance varies.

This research proposes a model utilizing Microsoft Azure Machine Learning Studio to compare the performance of two-class boosted decision tree and two-class decision forest algorithms in detecting fake job posts. Evaluation metrics such as F1 Score, Recall, Accuracy, and Precision are employed for comparison. The results indicate that the two-class boosted decision tree outperforms the two-class decision forest algorithm in detecting fake job posts. However, the decision forest algorithm may still be valuable for identifying false information in messages, tweets, and social media posts.[6].

Globally, the number of internet users has increased significantly as a result of the swift development of network technology, according to N. Bhoj et al. (2021). On the other hand, as a result of this increase in internet usage, there are also more bad websites and cybercrimes.

Thus, the need to create intelligent systems that can instantly identify rogue websites has arisen. Our research involves a comparative investigation of several feature selection methods in order to build an accurate and timely forecasting model. By using these methods, a set of features that are essential to the predictive model's functionality can be found. Interestingly, more than 70% of the characteristics selected using all approaches are categorical, which means that processing and storing them will be less expensive than using text- or image-based features. Taking care of the original disparity in class.[7].

According to P. Rimba.et al.,2022 the rise in popularity of social media platforms like Twitter has resulted in an increase in spamming activity. Researchers used a variety of machine learning techniques to identify spam on Twitter. Nonetheless, the majority of current studies are restricted to theoretical analysis, and only a small number of them are able to deploy detection methods in practical settings.

In this research, we close the gap by presenting a near real-time Twitter spam detection system that includes live visualisation of detection results, training of a detection model, extraction of lightweight features from a particular Twitter account, and near real-time tweet data gathering. To help with spam identification, this algorithm extracts features based on both accounts and content. Our Twitter spam detection solution applies models that are trained using portal.[8].

According to Y. Kumar.et al., 2021, a successful phishing assault can lead to a number of more serious attacks, including ransomware and malware infestation of the victim's workstation, unauthorized access to the user's private information, and stolen login credentials. In this paper, a real-time, lightweight machine learning-based security system for phishing attack detection via Uniform Resource Locator (URL) analysis is proposed.

From the URL string corpus, the suggested approach first extracts a set of highly discriminating and uncorrelated characteristics. The URL strings are subsequently converted into the appropriate numeric feature vectors using these extracted features, and these feature vectors are then utilized to train several machine learning-based classifier models for the detection of dangerous phishing URLs. An evaluation of the suggested security's performance.[9].

A. Kumar.et al., 2022 With the expansion of the digital world and technological advancements, cyberbullying has become increasingly common, particularly among teenagers.

This article represents a first effort to examine the use of sentiment and emotion data in detecting cyberbullying within the context of India.

A benchmark Hind-English code-mixed corpus named BullySentEmo was created from Twitter because no dataset with the labels bully, sentiment, and emotion was available. The generated dataset includes both the tweet-text and emoji modalities. Language flipping is a frequent activity in digital communication, with Hindi and English accounting for the majority of communication on various social media platforms in India. MT-MM-Bert+VecMap is a multitask multimodal framework based on the BERT and VecMap embedding schemes.[10].

III. PROPOSED SYSTEM

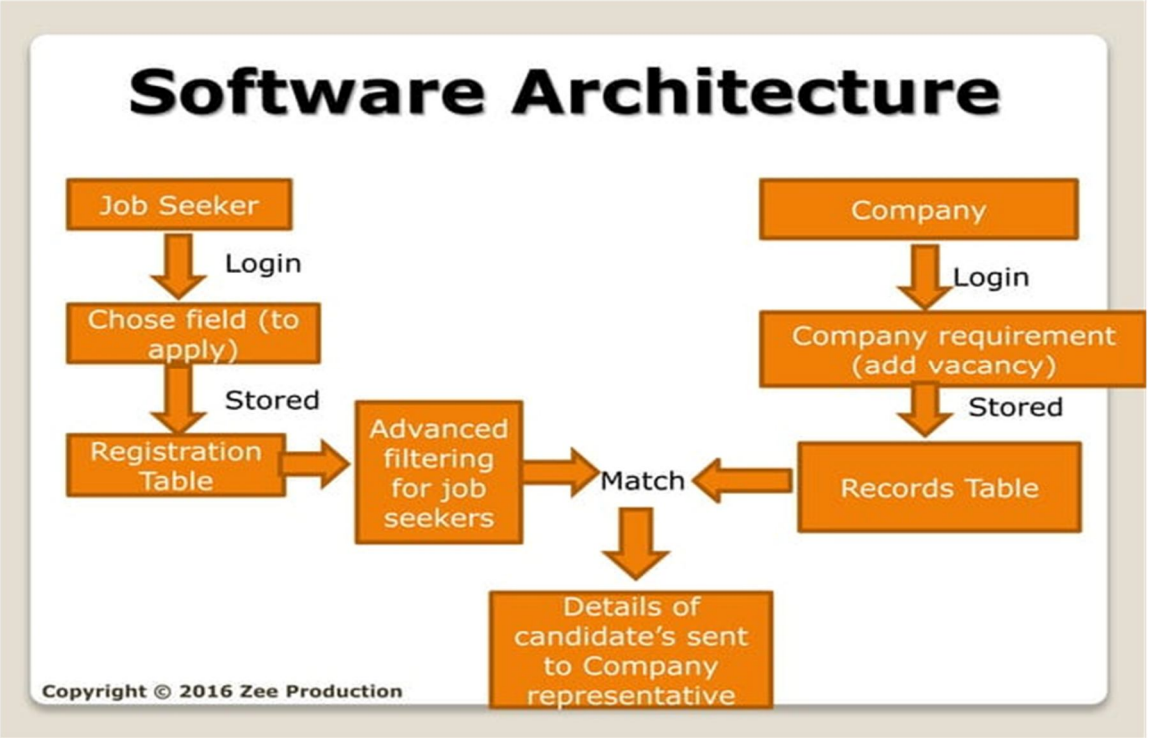
This project has been mainly designed to overcome some of the problems faced with the previous system. The main problem faced was unnecessary delay in generating the required information by all unnecessary fields into consideration. It provides an efficient way to pass the information between different users to cater their needs.

It is a Complete Portal for Job seekers and employers. It is an exclusive career portal aimed just for the service of job seekers. It is a common platform where corporate recruiters and job seekers come under roof. It is a one stop information clearing house about jobs and careers. Job Miller mainly aims on two kinds of users.

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A. Architecture Diagram



B. Main Modules

1) *User / Job Seeker Modules:* Our platform offers a comprehensive suite of features tailored to streamline the job search process and enhance career development. With User Registration, individuals can effortlessly create new accounts by providing essential details like name, email, and password. Profile Creation empowers users to craft and manage professional profiles, encompassing personal information, work experience, education, skills, and preferences. Job Search tools enable efficient exploration and filtering of job listings based on various criteria such as location, industry, job title, experience level, and salary. Moreover, our Saved Searches feature allows users to store preferred search criteria and receive notifications for new job postings matching their preferences. Application Management simplifies the process of applying for jobs, enabling users to track application statuses and manage their application history seamlessly. Users can showcase their qualifications effectively through Resume Upload, facilitating employer review. Interview Scheduling tools facilitate seamless coordination of job interviews, integrating with calendars and sending reminders. Skill Assessment features empower users to evaluate their skills and receive tailored recommendations for job opportunities or training programs. Additionally, our platform offers Career Resources including articles, blogs, tutorials, and other materials to assist users in enhancing their job search skills, interview preparation, and career advancement.
2) *Company/Employer Modules:* Our platform provides a comprehensive array of tools designed to streamline the recruitment process for organizations. With Company Registration, companies can easily create accounts and furnish vital information about their organization, encompassing details like company name, industry, size, and location. Job Posting functionality empowers employers to craft and disseminate job listings efficiently, specifying key details such as job title, description, requirements, and application instructions. Candidate Management tools equip employers with resources to efficiently review and oversee job applications, including sorting, filtering, and communication with candidates. Access to the Resume Database enables employers to search and browse through a vast pool of job seeker resumes, facilitating the identification of suitable candidates for their job openings. Application Tracking features provide insights into the performance of job postings, including metrics such as views, applications received, and applicant demographics. Communication Tools facilitate seamless interaction between employers and job seekers, facilitating tasks like messaging, interview scheduling, and feedback provision. Furthermore, Employer Branding capabilities empower organizations to showcase their company culture, values, and benefits, thus attracting top talent and bolstering their employer brand.

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3) *Admin Modules:* In the realm of user management (3.1), administrators wield powerful tools to oversee user accounts, orchestrating facets like registration, authentication, and finely tuned access controls. In tandem, content management (3.2) empowers them with the means to curate job listings, polish company profiles, and administer various content streams within the portal's ecosystem. Delving deeper into the data landscape, analytics and reporting (3.3) illuminate usage patterns, job market dynamics, user demographics, and other pivotal metrics, presented through intuitive reports and analytical dashboards. Security and compliance (3.4) serve as the bedrock of the portal's integrity, safeguarding it with robust measures encompassing data encryption, user privacy fortification, and unwavering adherence to legal stipulations. Together, these pillars fortify the portal, ensuring seamless functionality, insightful analytics, and unwavering security in an ever-evolving digital landscape.

IV. RESULT & DISCUSSION

The results demonstrate the significant benefits of leveraging online job portals in modernizing the recruitment process. These platforms not only increase access to job opportunities but also improve the efficiency and effectiveness of the hiring process. By harnessing data-driven insights and advanced matchmaking algorithms, online job portals have the potential to revolutionize the way talent is sourced, evaluated, and hired. However, it's important to continuously iterate and improve these platforms to address evolving user needs and technological advancements. Incorporating feedback from users and staying abreast of industry trends will be critical in ensuring the continued success and relevance of online job portals. Moreover, efforts should be made to ensure inclusivity and accessibility for all users, including those from marginalized communities or with disabilities, to truly maximize the potential impact of online job portals on the job market.

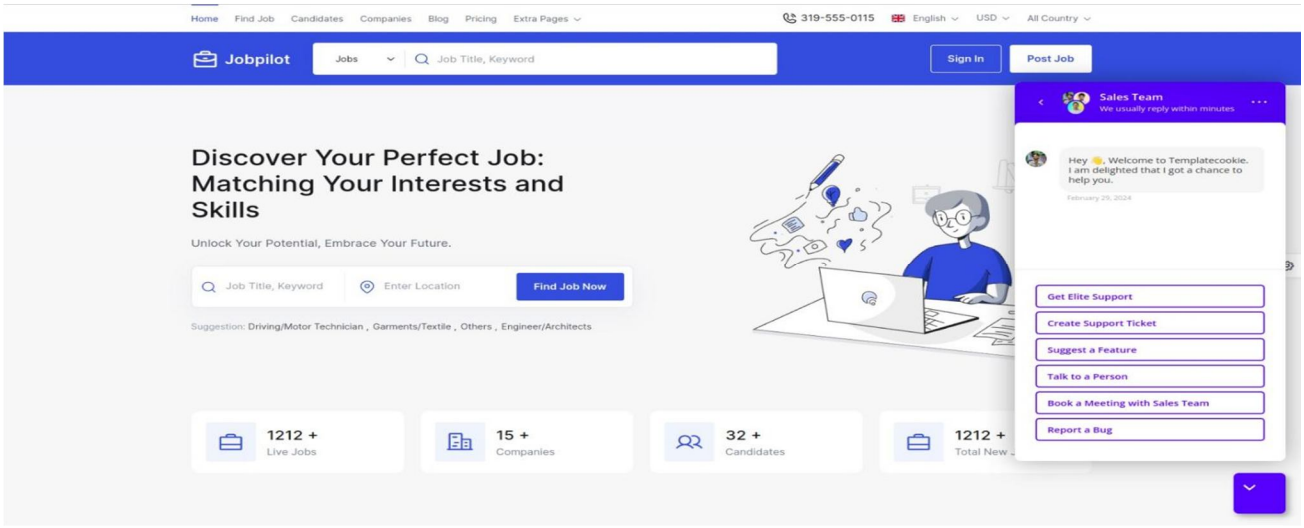


Figure 2. Desktop Login Page.

The job portal app features separate login pages for admins, company and candidates. After logging in, they access respective functionalities through the home page.

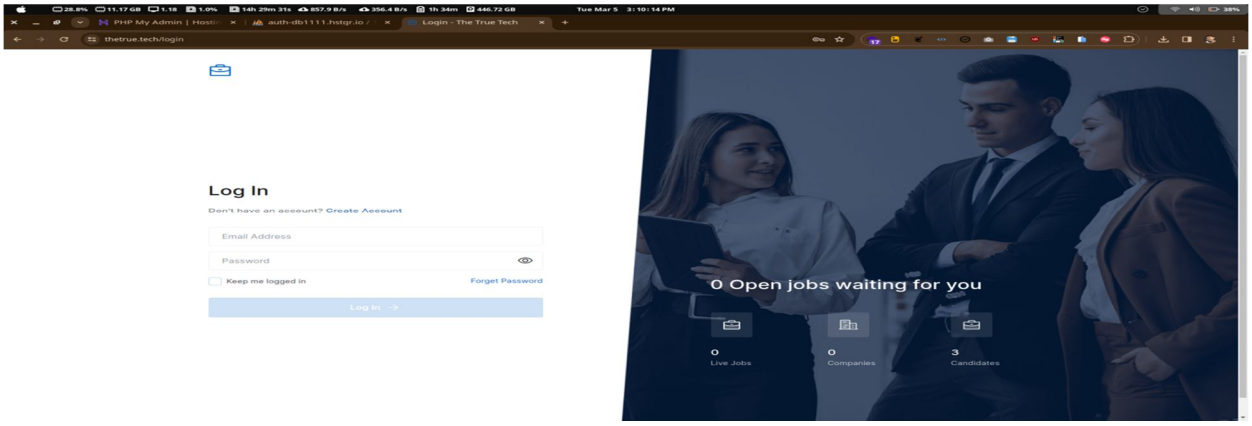


Figure 3. Desktop Login Form.

A user login form allows individuals to access a system or service with their credentials. It typically features fields for entering a username and password, facilitating secure authentication.

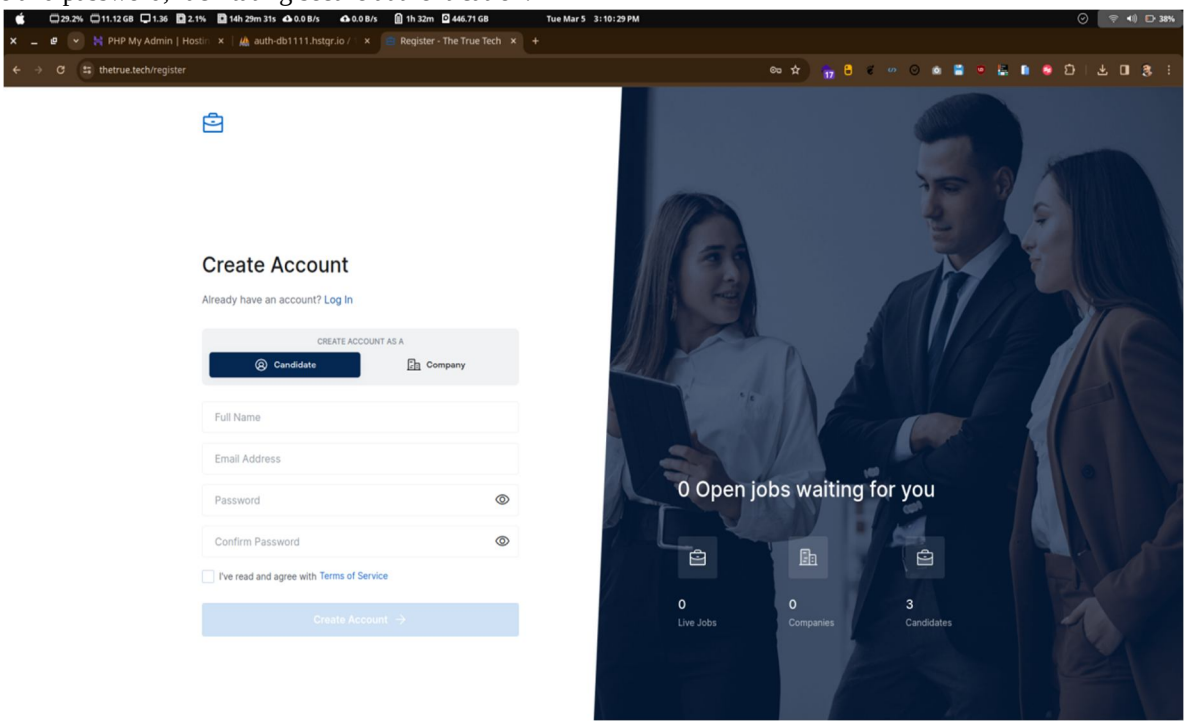


Figure 4. Account Creation Form.

The user registration form in job portal collects essential details such as name, email, and password. This information enables users to create accounts, access personalized details to admin.

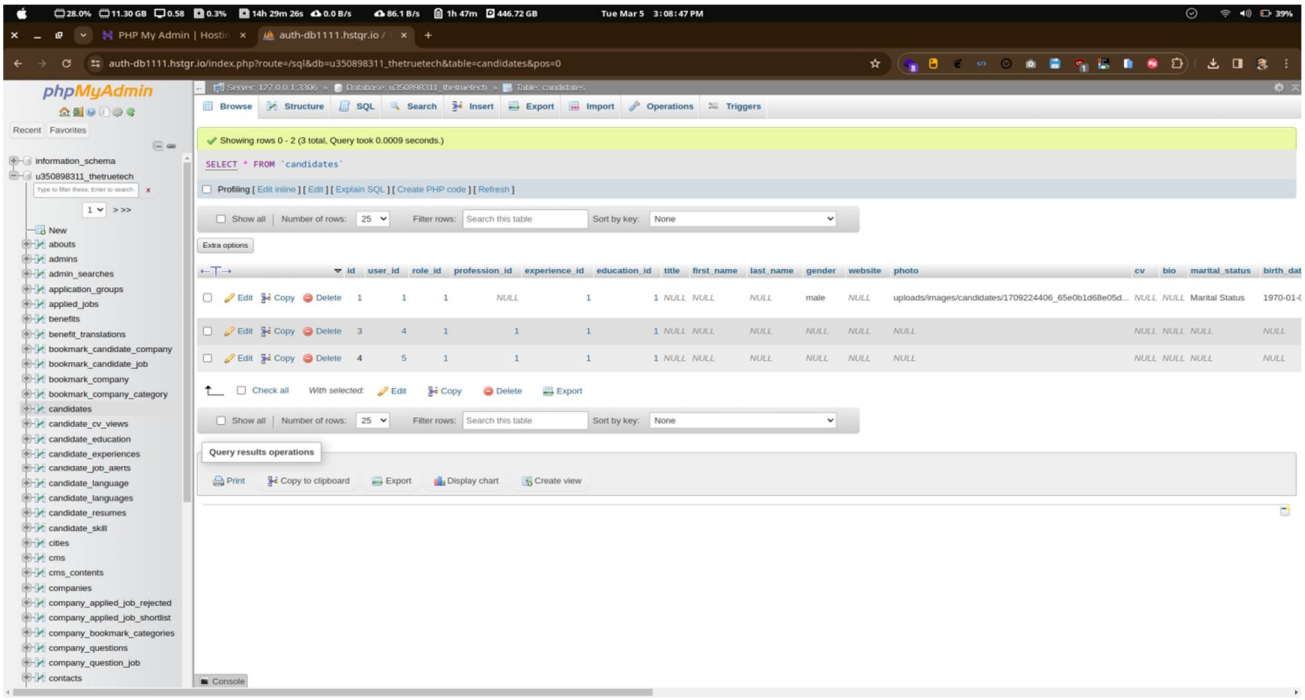


Figure 5. Desktop Admin Page.

In this portal admin can enables administrators to manage user accounts, including registration, authentication, and access control.

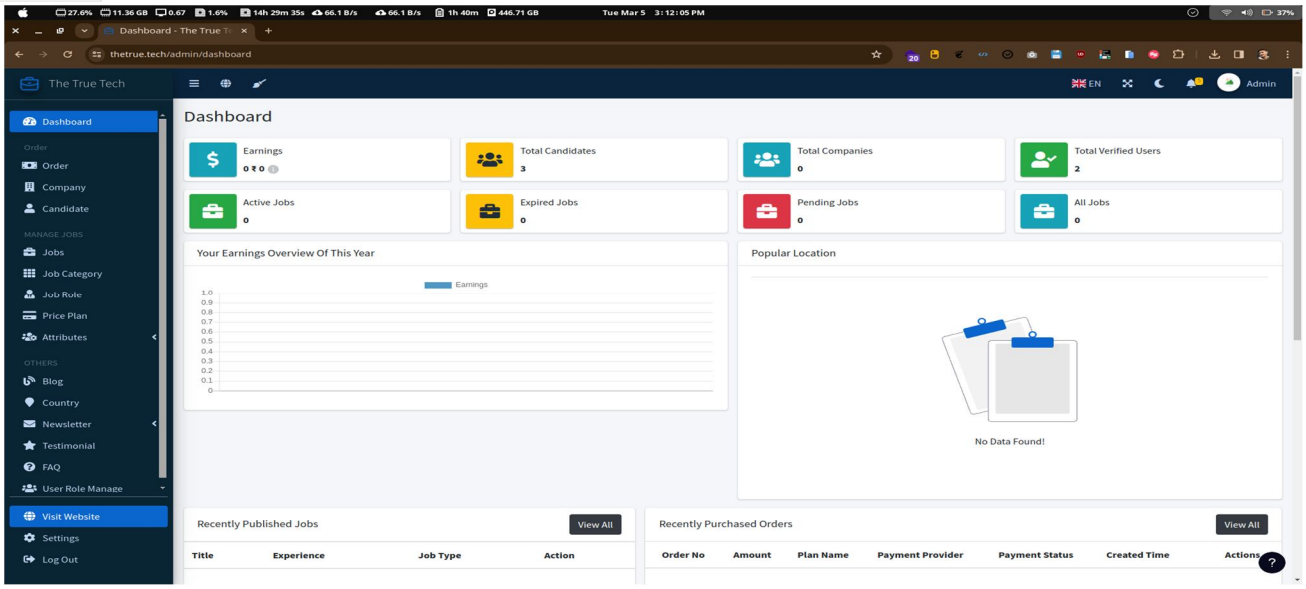


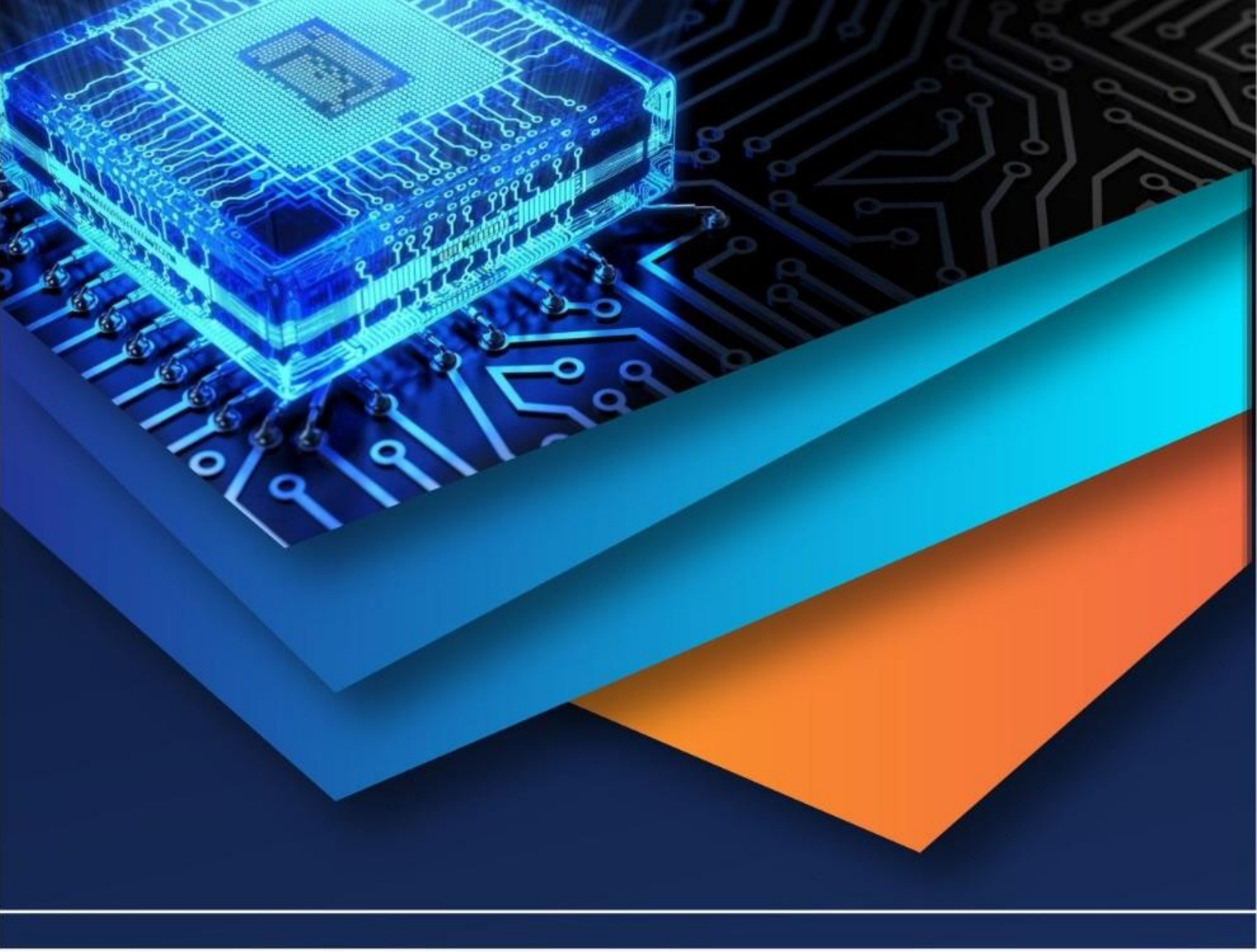
Figure 6. Desktop Dashboard

V. CONCLUSION

The development of an online job portal application offers significant benefits for both job seekers and employers. Through intuitive user interfaces, robust search functionalities, and seamless communication channels, such platforms streamline the job search and hiring process, fostering efficiency and accessibility. For job seekers, an online job portal provides a centralized platform to explore diverse employment opportunities, submit applications, and showcase their skills and experiences. Additionally, features such as personalized job recommendations and notifications enhance the user experience, empowering individuals to find relevant opportunities more effectively. Employers, on the other hand, benefit from access to a vast pool of talent, simplified candidate management tools, and data-driven insights to optimize their recruitment strategies. By leveraging features like applicant tracking systems and candidate screening mechanisms, businesses can identify and onboard top talent efficiently, ultimately driving organizational success. Moreover, the convenience and flexibility offered by online job portals resonate with the evolving dynamics of the modern workforce, accommodating remote work arrangements and facilitating global talent acquisition. In essence, the online job portal application serves as a catalyst for connecting talent with opportunities in a fast-paced digital landscape, fostering mutual growth and prosperity for job seekers, employers, and the economy at large.

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