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International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

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Job Enhancing Skill Portal

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ABSTRACT: Currently, there is more unemployment rate in India. The current year passed out batch, out of which 64% are unemployed graduates students are there in our Country. So, we are ready to contribute a help-in-hand to our graduates, in order to have an efficient support to our future generation. We are going to prepare a small introduction about you. Later in the future: - We will enhance it by creating Professional students can opt for various career paths based on their interests and skills. They can list the skills they have developed. Professional students include academic-related activities and achievements in their profiles. They document the events they have participated in. Professional students note their achievements in intra and inter competitions. They showcase their additional knowledge in other domains. Based on their skills, the platform facilitates direct conversations between professional students and industry experts. Professional students list all the E-Certificates they have obtained. They detail the proficiency tests they have taken. Professional students list the projects they have completed. They mention internships attended, specifying remote or direct, and any stipends received. They share the industrial knowledge they have gained. This ensures professional students' resumes are accurate and comprehensive, helping them achieve their dream job roles, with a little focus also given to employees for broader inclusivity.

I. INTRODUCTION

Around the world population there are 8.2-8.3 billion people living in the world.8.2- 8.3 billion in terms of World statistic is 8,200,000,000-8,300,000,000. Out of which Businessmen's - (there are totally, 5.82-5.83 million entrepreneur). World -Statically is (5,820, 000-5,830,000).In which one-third are women's. In Technology and IT industries (Many Entrepreneur, decides to exists in software products of creating app, to solve- real-life problems in an easy-simple and effective manner.(This includes their own innovation for the future purpose and meeting the demand of existing.)Retail and E-commerce (fashion to electronics everything are sell through the booming online stores and markets),Health care and Biotechnology (In most entrepreneur work area like medical devices, health services, and biotech innovation plays a crucial role.),Finance and Fin tech (Financial Technology is the booming one which affects the traditional and financial services),Manufacturing and Industrial Products (goods ranging from consumer products to industrial machinery).Education and E-learning (Online education platforms and educational tools are increasingly popular),Food and Beverage (Restaurants, cafes, and food delivery services are common entrepreneurial ventures),Real Estate and Construction (substantial entrepreneurial activity like Property development, real estate services, and construction projects),Tourism and Hospitality (Creating unique travel experiences, accommodations, and related services),Creative Industries (This includes media, entertainment, design, and arts.)Out of which Employment over this AI-tech driven-world is low persons are hired .In-which professional career, which doesn't provide enough or all employment for 95-100% job offers in IT-Technology sector. In-order to accelerate around-middle income family their prior income is from jobs .We have to meet the tech driven-AI world. By accelerate the business man - to run the business more effectively.

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II. LITERATURE SURVEY

[1] M Mansourvar, Yasin N.B.M .(2014) .Development of a Job Web Portal to Improve Education Quality-International Journal of Computer Theory and Engineering, Vol. 6, No. 1, ijcte(2014), February 2014,(pp .1-4).
The aim is to connect educational institutions with industry employers by developing a job web portal to improve educational quality. This will help access job opportunities through communication and meeting job market demands. In conclusion, it bridges the gap between employment and education by fostering collaboration.

[2] Prodhan, Mamunur Rashid M.D, Saha, Bijoy Kumar. (2017). Online Job Portal, Project-CSE 047 06266, CSE 047 06280, 9.3.2017(pp. 1-69).
To connect job seekers with industry experts (employees of companies) through an online job portal, we have developed a user-friendly platform that facilitates communication, job listings, and opportunity searches. In conclusion, improving employment rates through skill enhancement and increased accessibility will help achieve better job recruitments.

[3] Mustafa Pinjari, Nishit De, Rutvij Kokne, Aamir Siddiqui, Dnyanoba Chitre. International Research Journal of Engineering and Technology (IRJET), Vol. 6, irjet, 04.04.2019(pp. 1-4).
An online job portal between employers and job seekers facilitates job efficiency. It creates an interactive platform allowing users to post job openings, upload resumes, and receive personalized job listings. In conclusion, both employers and job seekers benefit by enhancing hiring opportunities.

[4] Prodhan Manwar Sayeem M.D, Student's Portal, Bachelor's Thesis, Spring 2021, Information Technology, Oulu University of Applied Sciences, (2021),(pp 1-46).
From education to employment, the transformation is facilitated through a student job portal connecting them to job opportunities. Based on their skills and education, students can upload their resumes, receive tailored recommendations, and browse job listings. In conclusion, enhancing the student portal improves access to job opportunities, supports career growth, and builds better employability.

[5] Budharapu Akshay, Ravula Arun Kumar1, Thudum Ramyasri1, Kosuna Arpitha1, Personalized Job Opportunity Finder powered by Web Scraping, MATEC Web of Conferences 392, 01151 (2024),(pp. 1-9).
The aim is to aggregate job listings from various online resources to tailor job recommendations. Algorithms will be applied to gather job data, match preferences, and update profiles using web scraping techniques. In conclusion, this increases the chances of finding relevant opportunities by analyzing personal results with the introduced tool.

III. EXISITING SYSTEM

Job Portals:-The Existing Platforms like Naukri, LinkedIn and Indeed .These Platforms often lack personalized guidance, making it difficult for graduates to stand out. University/College Placement Cell:-Placement cells inside the University of any College will have only often limited in their reach and resources. Networking Events and Career Fairs: Various organizations host networking events these events are sporadic and may not provide long-term support. Online Course and Certifications: -Platforms like Coursera, Udemy, and edX these platforms help enhance skills. They don't directly connect graduates with job opportunities. Government Employment Schemes:-National Career Service Employment Schemes aim to improve employment rates initiated by government of the India. The existing systems have their strengths but often fall short in providing a comprehensive, personalized, and supportive approach tailored specifically for fresh graduates.

IV. PROPOSED SYSTEM

Our Proposed System aims to provide a Comprehensive solution to address the high unemployment rate among recent graduates in India. Comprehensive Support: Offers end-to-end support from profile creation to job placement, ensuring graduates have all the resources they need to succeed. Enhanced Employability: Improves graduate's employability by highlighting their skills, achievements, and industry-relevant qualifications in a visually appealing resume. Personalized Guidance: Provides personalized guidance and mentorship from industry experts, helping graduates navigate their

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career paths more effectively. Practical Experience: Offers access to internship and project opportunities, allowing graduates to gain practical experience and strengthen their resumes.

Architecture Diagram:-

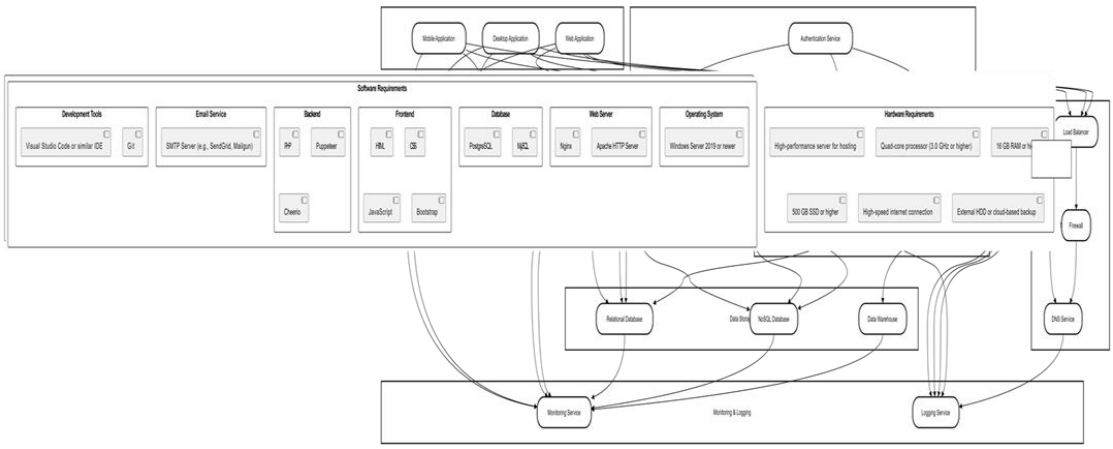

Fig: An overview of Architecture Diagram for software and hardware specifications

V. METHODOLOGY OF APPROACH

This system involves a range of software components, which together ensure the smooth development, operation, and management of the application.

Operating System: Windows Server 2019 or newer is used to provide a reliable, secure, and scalable hosting environment for enterprise applications. It ensures smooth performance and supports virtual environments for scalability.

Web Server: Apache HTTP Server or Nginx serves as the primary web server, handling HTTP requests and ensuring secure access to application resources. Apache offers rich features for dynamic content, while Nginx provides a lightweight alternative optimized for handling high traffic.

Database Management System: MySQL or PostgreSQL are employed to manage structured data efficiently. Both databases offer high reliability and support transactions, ensuring smooth data storage and retrieval. They allow developers to choose between relational data models and perform analytical workloads seamlessly.

Frontend Technologies:
HTML: Provides the base structure of the user interface (UI).
CSS: Responsible for styling the UI and ensuring responsive layouts.
JavaScript: Handles dynamic behavior, interactivity, and client-side logic.
Bootstrap: Offers ready-to-use components and grid layouts for rapid UI development, ensuring design consistency across devices.

Backend Technologies:
PHP: Manages the business logic, connecting the frontend with the database, and generating dynamic web content.
Puppeteer: A headless Chrome browser library used for web automation, testing, and scraping tasks.
Cheerio: A lightweight parser for extracting and manipulating content from HTML documents often used for web scraping.

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SMTP Server (Email Services):
Services like SendGrid or Mailgun provide SMTP functionality to send transactional emails and notifications from the application. These tools ensure reliable delivery and management of automated email communication.

Development Tools:
Git: A version control tool that enables collaborative coding by tracking changes in the code base.
Visual Studio Code (or Similar IDE): An integrated development environment that simplifies the development process through code suggestions, debugging features, and extensions.

Basics process Diagram:-

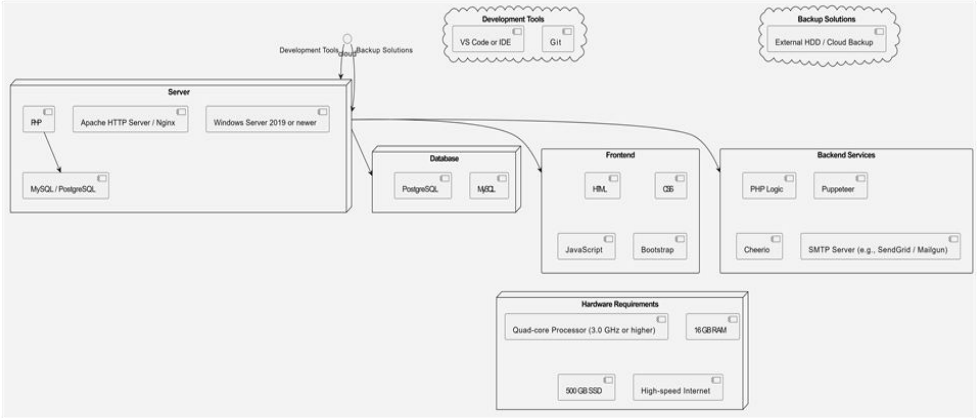

Fig:-An overview of architecture Diagram using hardware and software specifications

Hardware Requirements:
The following hardware specifications are recommended to ensure that the system performs efficiently and can handle future scalability.

High-Performance Server:
A dedicated server will host the web application, ensuring availability and responsiveness. The server must be capable of supporting multiple users concurrently without performance bottlenecks.

Processor:
A quad-core processor with a clock speed of 3.0 GHz or higher is required to run multiple processes simultaneously, ensuring that both backend and frontend services operate smoothly.

Memory (RAM):
A minimum of 16 GB RAM is essential to manage concurrent processes and support web services efficiently. This ensures that database queries, web requests, and server-side logic can execute without lag.

Storage:
500 GB SSD or higher is recommended for fast data access. SSDs provide quicker read/write speeds compared to traditional hard drives, which is crucial for database-heavy applications.

Internet Connection:
A high-speed internet connection is required to ensure seamless communication between the server and end users. It reduces latency and ensures smooth integration with cloud services, external APIs, and databases.

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Backup Solution:
An external HDD or cloud-based backup service is essential for safeguarding data against potential failures or disasters. A good backup strategy ensures business continuity by recovering lost data quickly.

VI. RESULT AND DISCUSSION

Traditional job portals might have a response time of several seconds per query, depending on the number of users and the complexity of the search. The proposed system, with optimized algorithms and AI-driven recommendations, aims to achieve faster, consistent response times, ideally around 1-2 seconds per query, even during peak usage. These are estimates, and actual values can vary based on factors like server capacity, the quality of the recommendation model, and the variety of jobs posted. The effectiveness of the system also depends on the diversity of the training data, the relevance of user profiles, and real-time updates to the job database. The highest recommendation accuracy can be achieved by integrating a multi-tiered recommendation engine, with an accuracy of 92% and a response time of 1.5 seconds. While the speed decreases slightly with an increase in user numbers, the accuracy improves by 1.5% over time, making it a reliable system for both job seekers and employers. The portal's scalability allows it to handle increasing users efficiently. Manual searches require more human support as users grow. Traditional portals need hardware upgrades for larger user bases. The proposed AI-enhanced system offers high scalability, managing more users without significant changes, as long as server infrastructure supports data processing needs. Manual job matching achieves 60-70% accuracy, often subjective and error-prone. Traditional portals might reach 70-80% accuracy, depending on algorithms. The proposed system, using machine learning, aims for higher accuracy (85-95%). Performance advantages include higher matching accuracy with AI, lower irrelevant recommendations, faster response times, and high scalability for large user bases.

VII. FUTUTRE ENCHANCEMENTS

Future enhancements for the Job Enhancing Skill Portal include supporting multiple learning formats like live webinars, podcasts, and workshops. AI-powered personalized learning paths will tailor course recommendations based on user profiles and career goals. Gamification elements, such as badges and leaderboards, will motivate users to complete courses. Skill assessments through real-world projects will provide hands-on experience. Integration with job portals will showcase certified skills on user profiles. Continuous learning alerts will notify users of new courses and market trends. Partnerships with corporations and educational institutions will offer exclusive industry-specific courses. A dedicated mobile app will increase accessibility, while multi-language support will cater to a global audience. Advanced analytics will track learning progress and performance trends. Mentorship programs and peer learning forums will enrich the user experience. Integration with professional development programs will help employees advance their careers.

VIII. CONCLUSION

The Job Enhancing Skill Portal utilizes advanced technologies to create a dynamic platform for skill development and career advancement. It enables users to acquire new skills through online courses, assessments, and certifications, thus enhancing employability. The portal offers seamless registration, course enrollment, and secure payment processing, providing access to diverse learning materials and certifications. Its intuitive interface ensures an engaging user experience for various backgrounds. By automating course management, certification issuance, and skill tracking, the portal simplifies the learning process, enhancing user satisfaction. Real-time progress tracking motivates users to complete courses and gain new qualifications. Designed for scalability, the portal supports an increasing number of users and courses, making it a valuable resource for job seekers, students, and professionals. The portal showcases the transformative power of technology in education and employment, offering a comprehensive, scalable solution for skill development. Combining user-friendly design, secure transactions, and effective course management, it helps users achieve their career goals and meets the project's objectives successfully.

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