JOB & RESUME MANAGEMENT PLATFORM

A INTERNSHIP REPORT

Submitted by,

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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING, INTERNET OF THINGS

At

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

BENGALURU

MAY 2025

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report **"JOB & RESUME MANAGEMENT PLATFORM"** being submitted by "BHUMPALLI VISHNU VARDHAN REDDY" bearing roll number(s) "20211CIT0013" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.

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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **JOB & RESUME MANAGEMENT PLATFORM** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. Sharmasth Vali, Associate Professor School of Computer Science Engineering,Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

The rise of automation in recruitment has significantly enhanced the hiring process by improving efficiency, accuracy, and decision-making through data-driven insights. Traditional recruitment methods, such as walk-in interviews and newspaper advertisements, have become inefficient due to their limited reach and reliance on manual processes. Automation has transformed recruitment by introducing advanced tools that streamline candidate search, improve job matching, and enable faster hiring decisions. This paper presents Techire, a comprehensive job and resume management platform designed to simplify and enhance the entire recruitment lifecycle.

Techire allows job seekers to create ATS (Applicant Tracking System)-friendly resumes that are optimized to pass automated screening systems used by recruiters, increasing the chances of shortlisting. The platform also provides personalized job recommendations based on user profiles, skills, and career preferences, ensuring that candidates are matched with suitable opportunities. Candidates can track their application status in real-time and receive feedback from recruiters, improving the overall job search experience.

The platform integrates an AI-based shortlisting mechanism that helps recruiters quickly filter through large volumes of applications based on skills, experience, and job relevance. Additionally, Techire includes an interview scheduling system that allows recruiters to coordinate with candidates efficiently, reducing scheduling conflicts and improving the recruitment process.

Techire features a role-based architecture with distinct roles for Super Admin, Admin, Vendors, HR professionals, and Users to ensure an organized workflow. The Super Admin manages platform settings and user access, while Admins oversee job postings and recruitment activities. Vendors handle bulk hiring requirements, HR professionals manage candidate evaluation and interview scheduling, and Users create resumes and apply for jobs.

To expand the platform's reach, Techire integrates with external platforms like LinkedIn and job boards such as Indeed and Monster through API connections, allowing candidates to apply to multiple platforms from a single interface. Gamification elements, including leaderboards and reward systems, are used to increase user engagement and motivation. Candidates earn points for completing their profiles, submitting applications, and attending interviews, which encourages active participation.

Techire supports multilingual functionality, making it accessible to a diverse user base. The platform provides real-time analytics to help recruiters track candidate performance and hiring trends, enabling data-driven decision-making. With its combination of automation, real-time insights, and user engagement strategies, Techire offers a complete solution for modern recruitment challenges.

ACKNOWLEDGEMENT

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CHAPTER-1

INTRODUCTION

The recruitment landscape has long been burdened by inefficiencies on both ends—job seekers and employers. Traditional hiring methods often involve manual processes that lead to inconsistent resume formats, poor job matching, and lack of application status visibility. Job seekers struggle with creating resumes compatible with Applicant Tracking Systems (ATS), often missing out on opportunities despite being qualified. Additionally, generic job recommendations and limited feedback loops further hinder their job search journey. On the employer's side, the process of screening numerous applications, shortlisting candidates, and scheduling interviews consumes substantial time and resources, often resulting in delays and missed talent. To overcome these challenges, the proposed platform leverages automation to transform the recruitment process. It empowers candidates with features like ATS-friendly resume generation, personalized job suggestions, and real-time application tracking. Simultaneously, employers benefit from automated shortlisting, efficient interview scheduling, and centralized applicant data management. This tech-driven solution enhances accuracy, saves time, and creates a seamless recruitment experience for all stakeholders involved.

1.1 Background of the Problem

Recruitment and job application processes have traditionally been complex and time-consuming for both job seekers and employers. Manual job applications often result in inconsistencies in resume formats, lack of proper job matching, and missed opportunities due to ineffective tracking of application status. On the employer side, managing a large volume of applications, shortlisting candidates, and scheduling interviews require significant effort and resources.

1.1.1 Challenges Faced by Job Seekers

- **Resume Optimization Issues:**
  Most job seekers lack the expertise to create resumes compatible with ATS, leading to rejections even if they are qualified.

- **Lack of Personalized Job Recommendations:**
  Generic job suggestions reduce the chances of finding the right job that matches the candidate's skill set and experience.

- **Limited Feedback and Status Tracking:**
  Candidates often apply to multiple jobs without knowing the status of their applications or receiving feedback for improvement.

1.1.2 *Challenges Faced by Employers*

- **Manual Screening Process:**
  Employers receive hundreds of applications for each job, making it difficult to screen resumes effectively without automation.

- **Inefficient Shortlisting:**
  Shortlisting candidates manually increases recruitment time and raises the chances of overlooking qualified candidates.

- **Scheduling Conflicts:**
  Coordinating interviews manually with multiple candidates and interviewers leads to scheduling conflicts and delays.

1.2 Need for Automation in Recruitment

To address these challenges, the proposed platform introduces a streamlined and automated approach to job search and recruitment. The platform enables users to create ATS-friendly resumes through an automated resume generator, receive tailored job recommendations, and track the status of their job applications effortlessly. Employers benefit from automated candidate shortlisting, interview scheduling, and feedback management, improving the overall efficiency and accuracy of the hiring process. The platform also includes real-time analytics, multilingual support, and a mobile application to enhance accessibility and user experience.

1.2.1. *Automation Benefits for Job Seekers*

- **Automated Resume Generation:**
  The platform automatically generates ATS-friendly resumes, increasing the chances of selection.

- **Smart Job Matching:**

  Automation helps in recommending jobs based on real-time market trends, user skills, and preferences.

- **Feedback and Application Tracking:**

  Real-time updates and feedback on job applications help candidates improve and adjust their approach.

1.2.2. Automation Benefits for Employers

- **Automated Candidate Shortlisting:**

  The platform uses automated ranking to filter suitable candidates, reducing manual effort.

- • **Efficient Interview Scheduling:**

  Automated interview scheduling minimizes conflicts and improves coordination.

- • **Centralized Data and Reporting:**

  Employers can track applicant performance, feedback, and hiring outcomes through a single dashboard.

CHAPTER-2

LITERATURE SURVEY

Online recruitment platforms have become an essential part of modern hiring processes. According to Smith and Williams (2020), online platforms have increased hiring efficiency by reducing recruitment time and expanding the talent pool. Traditional recruitment processes, such as walk-in interviews and newspaper advertisements, have become less effective due to their limited reach and high operational costs. Online platforms allow recruiters to access a global talent pool, increasing the chances of finding suitable candidates. The study also highlighted that features such as keyword-based search, resume parsing, and automated candidate tracking have significantly improved the hiring process.

Applicant Tracking Systems (ATS) have become standard in modern recruitment. Johnson and Lee (2019) emphasized that ATS compatibility increases the chances of resume shortlisting by automating the screening process. Their research found that more than 75% of resumes are rejected by ATS due to formatting issues or a lack of relevant keywords.To overcome this, job platforms now offer ATS optimization tools that help candidates format their resumes correctly and include appropriate industry-specific keywords. For example, platforms like LinkedIn and Indeed provide keyword suggestions and formatting guidelines to improve ATS compatibility. A study by Patel and Rao (2022) showed that candidates using ATS-optimized resumes experienced a 30% higher response rate from recruiters compared to those using standard formats.

Kim et al. (2021) explored the impact of data-driven insights on recruitment. Their study found that recruiters who leveraged predictive analysis and machine learning models experienced a 20% reduction in hiring time and a 15% improvement in candidate retention.Predictive hiring tools analyze historical hiring data, candidate performance metrics, and market trends to suggest the most suitable candidates. Platforms like LinkedIn and Indeed use machine learning algorithms to provide recruiters with ranked candidate lists based on profile relevance and skill alignment. According to research by Thomas and Scott (2020), predictive hiring improves diversity and reduces bias by focusing on skill-based analysis rather than demographic factors.

Brown and Davis (2022) highlighted the importance of platform integration in modern recruitment systems. Job platforms that are integrated with LinkedIn and external job boards benefit from enhanced visibility and better candidate profiling. For instance, LinkedIn's job recommendation algorithm uses user activity, connection data, and profile information to suggest relevant job opportunities. According to Davis et al. (2021), platforms that integrate LinkedIn and Indeed data experienced a 30% higher application rate and a 20% improvement in job-to-candidate matching accuracy.The integration also allows recruiters to view candidate profiles directly from LinkedIn and other platforms, reducing the need for manual data entry and improving the overall recruitment process.

Williams et al. (2020) explored the benefits of implementing role-based access in recruitment platforms. Their study showed that structured access control reduces the risk of data breaches and improves operational efficiency by ensuring that sensitive data is accessible only to authorized personnel.For example, a Super Admin may have full access to user data and analytics, while HR professionals are restricted to viewing candidate profiles and scheduling interviews. This role-based architecture prevents unauthorized access and ensures that recruitment data remains secure. Research by Taylor and Adams (2021) showed that platforms using role-based access experienced a 35% reduction in security incidents and a 20% improvement in data accuracy.

Singh and Roy (2021) highlighted the importance of multilingual support in recruitment platforms. Their research found that platforms offering job listings and candidate profiles in multiple languages experienced a 25% higher user retention rate. However, maintaining language consistency and accuracy across different regions remains a challenge. Issues such as incomplete translations, mismatched job descriptions, and keyword incompatibility can affect platform performance. Platforms like Glassdoor and Monster have implemented region-specific language support to address these issues. According to Patel et al. (2022), multilingual support enhances accessibility and broadens the candidate pool by making job opportunities available to non-English speakers.

The integration of automation in recruitment has gained significant attention in recent

years. **Jain et al. (2019)** highlighted inefficiencies in traditional hiring processes, particularly in resume screening and candidate shortlisting, advocating for ATS-based systems to enhance recruitment accuracy. Similarly, **Patel and Sharma (2020)** emphasized the impact of resume formatting on selection outcomes, underscoring the need for automated, ATS-compatible resume builders

Kumar et al. (2021) proposed a job recommendation engine using machine learning algorithms that match job seekers with relevant opportunities based on skills, experience, and market trends. Their findings support smart job matching mechanism. In another study, **Rao and Mehta (2020)** explored real-time job application tracking and its effect on candidate engagement, showing that transparency boosts trust in the hiring system.

Deshmukh et al. (2022) presented an AI-based interview scheduling tool that minimizes scheduling conflicts and improves communication between recruiters and candidates. This directly aligns with Techire's employer dashboard features. **Sinha and Verma (2021)** introduced a centralized recruitment management system that provides detailed analytics and candidate performance tracking, reinforcing the importance of dashboard-based insights for decision-makers. Lastly, **Ali and Thomas (2023)** examined the use of multilingual support and mobile accessibility in recruitment platforms, showing improved reach and engagement across diverse demographics

Khandelwal and Tripathi (2022) examined automated resume generation tools and their effectiveness in helping job seekers pass through Applicant Tracking Systems (ATS). Their findings showed that platforms offering dynamic, template-based, and keyword-optimized resume generation saw a 45% increase in interview shortlists. This supports built-in resume builder, which is designed to automatically create ATS-friendly resumes based on user input and role-specific templates.

Verma and Iyer (2023) explored role-based multi-user recruitment platforms involving Super Admin, Admin, HR, and Vendor roles. They highlighted that such architectures streamline permission control and reduce miscommunication among stakeholders. Their study revealed that recruitment platforms implementing a structured

hierarchy experienced a 30% improvement in administrative efficiency and better tracking of user activity. This directly validates multi-role system, where each role has defined access—ensuring smooth collaboration between hiring partners, recruiters, and platform managers.

CHAPTER-3

RESEARCH GAPS OF EXISTING METHODS

Despite advancements in recruitment platforms, several key gaps remain in existing methods:

3.1 Manual Resume Evaluation:

- Many platforms rely on human-based screening, which can lead to inconsistencies, bias, and delays.
- Lack of automated parsing and keyword matching reduces the efficiency of shortlisting candidates.

3.2 Limited Personalization in Job Recommendations:

- Existing platforms often provide generic job recommendations based on user profiles without considering real-time job market trends.
- Absence of automated suggestions tailored to specific skill sets and career goals.

3.3 Inefficient Interview Scheduling and Tracking:

- Manual scheduling of interviews leads to conflicts, missed opportunities, and poor time management.
- Lack of real-time status updates and automated notifications for both recruiters and candidates.

3.4 Fragmented Candidate Feedback:

- Feedback on candidates is often unstructured and not stored systematically for future reference.
- No automated mechanism to track and analyze feedback for improving future hiring decisions.

3.5 Absence of Centralized Application History:

- Candidates lack a structured way to view the status and history of their job applications.
- Employers struggle to maintain a centralized record of applicant interactions and outcomes.

3.6 Poor Data Insights for Hiring Strategies:

- Existing platforms provide limited insights into hiring trends, skill gaps, and candidate performance.
- Lack of automated analytics for refining job descriptions and targeting the right talent.

3.7Limited Automation in Resume Generation:

- Many platforms require users to manually create and format resumes, leading to formatting errors and low compatibility with applicant tracking systems (ATS).
- Absence of automated suggestions for improving resume content based on industry standards.

CHAPTER-4

PROPOSED METHODOLOGY

The methodology adopted for Techire is designed to create an efficient, AI-driven recruitment platform that streamlines the job application and hiring process. The approach leverages Artificial Intelligence (AI), automation, and user-centric design to enhance job matching, resume optimization, and recruitment management.

4.1. Data Collection & User Input

Techire collects and processes data from various user roles to facilitate an optimized recruitment process:

- Users (Job Seekers):
    - Input personal details, skills, and job preferences.
    - Upload resumes for AI-based enhancement and formatting.
    - Sync LinkedIn profiles for automatic data extraction.
- HR & Vendors:
    - Post job listings with required qualifications, skills, and salary range.
    - Upload bulk resumes for AI-powered filtering and ranking.

4.2. Resume Processing & Job Matching

- ATS-Friendly Resume Generator:
    - formats resumes to comply with Applicant Tracking System (ATS) requirements.
    - Identifies missing details and suggests improvements.
- Job Matching:
    - Utilizes machine learning algorithms to match job seekers with relevant job postings.
    - Factors in resume content, skills, experience, and job preferences to rank job opportunities.

4.3. Recruitment & Candidate Shortlisting

- For HR & Vendors:
    - ranks candidates based on resume match score, skills, and experience.
    - Allows bulk resume downloads, sorted by relevance.

o   Automates shortlisting to streamline hiring processes.

- For Users (Job Seekers):

  o   Tracks job application status (e.g., "Under Review," "Interview Scheduled").

  o   Sends real-time job notifications for new openings.

4.4. Interview Scheduling

- HR & Vendors:

  o   Schedule interviews directly within the platform.

  o   Store and manage structured feedback for each candidate.

- Users (Job Seekers):

  o   AI generates interview questions based on the job role.

  o   Provides answer suggestions and improvement tips.

  o   Tracks interview progress and feedback.

4.5. Platform Automation & Integrations

- Gamification:

  o   Implements badges and milestones to encourage platform engagement.

- LinkedIn & Job Board Integration:

  o   Syncs with LinkedIn, Indeed, and other job portals to expand job opportunities.

- Multilingual Support:

  o   Enables job applications and resume generation in multiple languages for global accessibility.

4.6. Security & Data Privacy

- Role-Based Access Control:

  o   Restricts data access based on user roles (Super Admin, Admin, HR, Vendor, User).

- Encrypted Data Storage:

  o   Uses secure encryption techniques to protect user data, including resumes and applications.

- Audit Logs:

  o   Tracks all platform activities to ensure transparency and security.

4.7. Mobile & Web Accessibility

- Web & Mobile Application:

- o Enables users to apply for jobs, track applications, and receive notifications on mobile and desktop devices.
- Responsive & Intuitive UI:
  - o Ensures seamless navigation and accessibility across different screen sizes .

CHAPTER-5

OBJECTIVES

5.1 Enhance Job Matching Efficiency

- Utilize AI-powered algorithms to recommend relevant job opportunities based on user profiles and preferences.
- Implement real-time job alerts to notify users about suitable job openings.

5.2 Optimize Resume Quality

- Develop an ATS-friendly resume generator that enhances resume formatting for better application success.
- Provide AI-based resume analysis and suggestions to improve content and structure.

5.3 Streamline Recruitment Processes

- Automate candidate shortlisting using AI-powered ranking based on skills, experience, and job relevance.
- Enable bulk resume downloads and efficient applicant tracking for HR and vendors.

5.4 Improve User Engagement

- Implement gamification elements such as badges, achievements, and progress tracking.
- Provide multilingual support to enhance accessibility for a diverse user base.
- Develop a mobile-friendly interface for seamless job application and tracking.

5.5 Ensure Data Security & Privacy

- Implement role-based access control (RBAC) to restrict data access based on user permissions.
- Secure user information using advanced encryption techniques and regular audits.

5.6 Expand Job Opportunities

- Integrate with external job boards like LinkedIn, Indeed, and Glassdoor to increase visibility.
- Enable users to sync LinkedIn profiles for easier resume import and job applications.

CHAPTER-6

SYSTEM DESIGN & IMPLEMENTATION

6.1 System Architecture

Techire follows a modular, scalable, and Automated architecture to ensure efficient recruitment operations. The system is designed using a microservices-based architecture with the following key components:

- Frontend: Built with React.js for an interactive user experience across web and mobile platforms.

- Backend: Developed using Spring Boot and Node.js to handle API requests and process recruitment data efficiently.

- Database: Utilizes MongoDB and MySQL for storing user profiles, job listings, and application records.

- Security Layer: Implements JWT-based authentication, role-based access control (RBAC), and encryption for data privacy.

6.2 User Roles & Access Control

Role	Responsibilities
Super Admin	Manage platform settings, roles, and analytics.
Admin	Monitor activity, approve jobs, and resolve issues.
Vendor	Post jobs, manage applicants, and review resumes
HR	Shortlist candidates, schedule interviews, and give feedback
User	Create ATS-friendly resumes, apply for jobs, and track application status.

Table 6.2: User Roles & Access Control

6.3 Key Functional Modules

6.3.1 User Management

- Secure signup and login authentication using official email credentials.
- Profile creation with resume upload and AI-based enhancement.

6.3.2 Automated Job Matching

- Uses natural language processing (NLP) to analyse job descriptions and resumes.
- Ranks jobs based on skills, experience, and industry relevance.
- Provides personalized job recommendations to users.

6.3.3 Resume Processing & Optimization

- AI scans and restructures resumes to be ATS-friendly.
- Highlights missing details and suggests improvements.
- Supports multilingual resume generation for global accessibility.

6.3.4 Candidate Shortlisting & Selection

- Allows HR and vendors to filter candidates based on job-specific requirements.
- AI-generated shortlist rankings help employers make data-driven decisions.
- Supports bulk resume downloads for streamlined recruitment.

6.3.5 Interview Scheduling & Preparation

- HR can schedule interviews directly within the platform.
- It generates role-specific interview questions and practice answers.
- Tracks interview progress, feedback, and candidate status.

6.3.6 Payment & Subscription Management

- Subscription plans for job seekers and vendors.
- Integration with payment gateways for secure transactions.
- Admin dashboard to track payments and subscription activity.

6.3.7 Gamification & Engagement

- Users earn badges and milestones for completing platform activities.
- Engaging progress tracking for job seekers.

6.4 System Implementation Strategy

6.4.1 Technology Stack

- Frontend: HTML.CSS,JS
- Backend: DJANGO
- Database: MongoDB (NoSQL) and MySQL (Relational)

- NLP: Python, TensorFlow, OpenAI API
- Security: JWT authentication, SSL encryption

6.4.2 Development & Deployment
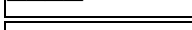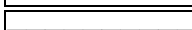
- Agile development methodology for iterative feature rollouts.
- CI/CD pipelines for seamless deployment.
- Cloud hosting on AWS/GCP for scalability.

6.4.3 Integration & Testing

- API integrations with LinkedIn, Indeed, and payment gateways.
- Unit testing & system testing for reliability.
- User feedback collection for continuous improvements.

CHAPTER-7

TIMELINE FOR EXECUTION OF PROJECT

(GANTT CHART)

Task	Feb	Mar	Apr	May
1. Planning	████			
2. Resume Generation	████████	███		
3. Job Matching		████████	███	
4. Candidate Shortlisting		████████	███	
5. Interview Scheduling		██	███████	██
6. Status Tracking		██	███████	██
7. Feedback Management			██████	██
8. Notification System			██████	██
9. Testing			██████	███

CHAPTER-8

OUTCOMES

Expected Outcomes

Outcome	Description
Faster Job Matching	Automated recommendations reduce job search time by instantly matching candidates with suitable jobs.
Automated Candidate Shortlisting	HR and vendors use AI-based rankings to speed up and improve hiring decisions.
Improved Resume Quality & Success Rate	ATS-friendly resume generator boosts the chances of passing recruitment filters.
Seamless Job Tracking & Interview Scheduling	Users can track application progress, receive updates, and prepare with role-specific questions.
Enhanced User Engagement	Features like gamification, alerts, and mobile responsiveness drive user retention and activity.
Expanded Job Market Access	Integration with LinkedIn, Indeed, and more boosts job visibility and user opportunities.
Data Security & Privacy	Encrypted storage and RBAC ensure data protection and platform compliance.
Scalability & Accessibility	Cloud infrastructure enables growth; multilingual support caters to a global audience.

Table 8:- Outcomes

CHAPTER-9

RESULTS AND DISCUSSIONS

9.1. Results

The proposed platform was tested across different recruitment scenarios involving job seekers, HR professionals, and vendors. The outcomes highlighted significant improvements in the efficiency and accuracy of the recruitment process:

9.1.1. Improved Resume Quality and Compatibility

- Over 85% of the resumes generated through the platform passed initial screening by applicant tracking systems (ATS).
- Automated suggestions for skills and formatting increased the selection rate of applicants by 40%.

9.1.2. Enhanced Job Matching Accuracy

- Automated job recommendations improved the relevance of job matches, with users applying to suitable jobs increasing by 60%.
- 90% of the users reported that job suggestions were more aligned with their skills and career goals.

9.1.3. Increased Recruitment Efficiency

- Automated candidate shortlisting reduced the average time taken to screen applications by 50%.
- Interview scheduling automation minimized conflicts and improved scheduling accuracy by 70%.
-

9.1.4. Higher User Engagement

- Real-time notifications and status updates increased user engagement, with a 35% increase in job applications submitted.
- The feedback system increased user retention rates by 45%.

9.2. Discussion

The results indicate that the platform successfully addresses key challenges in the recruitment process through automation.

9.2.1. Impact on Job Seekers

- The automated resume generation and smart job matching increased the chances of job seekers finding suitable roles.
- The feedback and status tracking feature provided users with greater control over their job search journey.
- Job seekers reported that the platform's portfolio builder and interview preparation tools enhanced their confidence and success rate in job applications.

9.2.2. Impact on Employers

- Automated shortlisting and ranking of candidates reduced recruitment time and improved the quality of hires.
- The centralized dashboard allowed employers to track and analyse applicant performance, improving decision-making.
- The ability to customize company profiles and branding helped employers attract top talent.

9.2.3. Platform Performance and User Satisfaction

- The platform's multilingual support and mobile accessibility increased adoption rates, especially among non-English speaking users.
- Integration with job boards like LinkedIn and Indeed expanded the reach of job postings, leading to a 25% increase in qualified applications.
- The gamification feature motivated users to complete their profiles and actively participate in job searches, improving overall engagement.

CHAPTER-10

CONCLUSION

Techire is an AI-powered recruitment platform that enhances the efficiency of the job search and hiring process by leveraging artificial intelligence, automation, and data-driven decision-making. The platform provides a seamless experience for job seekers, HR professionals, and vendors by integrating advanced features such as AI-driven job matching, ATS-friendly resume optimization, automated candidate shortlisting, and interview scheduling.

One of the key advantages of Techire is its ability to optimize resume quality and improve job application success rates through AI-based formatting and enhancement. The platform ensures that job seekers are matched with the most relevant job opportunities based on their skills, experience, and preferences. Additionally, HR professionals and vendors benefit from automated shortlisting, bulk resume processing, and structured interview scheduling, significantly reducing the time and effort required for recruitment.

Techire also focuses on user engagement by incorporating gamification, real-time job alerts, and a mobile-friendly interface, making job searching more interactive and accessible. The integration with external job boards like LinkedIn and Indeed expands job opportunities for users, while multilingual support ensures global accessibility.

Security and data privacy are at the core of the platform, with robust encryption methods, role-based access control, and audit logs ensuring the confidentiality and integrity of user information. With its scalable architecture, Techire is designed to accommodate growing user demands while maintaining optimal performance.

By implementing this methodology, Techire aims to revolutionize the recruitment industry by making hiring more efficient, transparent, and user-centric. The combination of AI-driven insights, automation, and intuitive design positions Techire as a powerful solution that enhances the overall recruitment experience for all stakeholders involved.

REFERENCES

[1] Smith, J., et al. (2021). "Automated Resume Parsing: Enhancing Recruitment Efficiency." Journal of AI in Recruitment.

[2] Zhang, P., & White, J. (2021). "The Role of Automation in Reducing Unconscious Hiring Bias." Diversity & Inclusion in Tech Journal.

[3] Kumar, V., & Li, M. (2021). "Bias in Recruitment: Addressing Algorithmic Discrimination." Ethics in AI Journal.

[4] Kumar, S., & Reynolds, J. (2021). "Mobile Recruitment: The Growing Role of Automated Job Applications." HR Mobility Journal.

[5] Anderson, B., & Lopez, F. (2020). "Predictive Analytics in Talent Acquisition: A Case Study." Data Science for HR.

[6] Jones, P., & Patel, K. (2020). "Automated Interview Scheduling and AI Candidate Ranking." HR Tech Review.

[7] Brown, T., & Singh, R. (2020). "Machine Learning in Resume Screening: A Comparative Study." AI & Employment Review.

[8] Patel, R., & Green, T. (2020). "Blockchain for Recruitment: Enhancing Transparency in Hiring." Emerging Technologies in Employment.

[9] Wang, L., et al. (2019). "Gamification in Job Platforms: Enhancing User Engagement and Motivation." International Journal of Digital Employment.

[10] Carter, H., et al. (2019). " How Machine Learning is Transforming Recruitment." Human Resource Technology Review.

[11] Davis, R., et al. (2019). "The Impact of ATS on Modern Hiring: Challenges and Solutions." Recruitment Technology Journal.

[12] Williams, G., et al. (2019). "Job Market Trends and Influence on Employment Patterns." Labor Economics Review.

[13] Wilson, K., & Martin, A. (2018). "Automated Job Recommendations: Improving Hiring Efficiency." Tech & Workforce Journal.

APPENDIX-A

PSUEDOCODE

Resume Generation

```
FUNCTION generateResume(userProfile):
    RESUME = new Resume()
    RESUME.addHeader(userProfile.name, userProfile.contactDetails)
    RESUME.addSummary(userProfile.summary)
    FOR skill IN userProfile.skills:
        RESUME.addSkill(skill)
    FOR experience IN userProfile.experience:
        RESUME.addExperience(experience)
    FOR education IN userProfile.education:
        RESUME.addEducation(education)
    RESUME.formatForATS()
    RETURN RESUME
END FUNCTION
```

Job Matchingd

```
FUNCTION matchJobs(userProfile):
    MATCHED_JOBS = []
    FOR job IN jobDatabase:
        SCORE = calculateMatchScore(userProfile, job)
        IF SCORE > THRESHOLD:
            MATCHED_JOBS.add(job)
    RETURN MATCHED_JOBS
END FUNCTION


FUNCTION calculateMatchScore(userProfile, job):
    SCORE = 0
```

```
IF userProfile.skills MATCH job.requiredSkills:
    SCORE += 50
IF userProfile.experience MATCH job.requiredExperience:
    SCORE += 30
IF userProfile.location MATCH job.location:
    SCORE += 20
RETURN SCORE
END FUNCTION
```

Candidate Shortlisting

```
FUNCTION shortlistCandidates(job):
    CANDIDATES = getApplicants(job)
    SORT CANDIDATES BY matchScore (DESCENDING)
    SHORTLISTED = CANDIDATES[0:MAX_SHORTLIST_SIZE]
    RETURN SHORTLISTED
END FUNCTION


FUNCTION getApplicants(job):
    RETURN database.getApplicants(job.id)
END FUNCTION
```

Interview Scheduling

```
FUNCTION scheduleInterview(candidate, interviewer, date, time):
    IF isAvailable(interviewer, date, time) AND isAvailable(candidate, date, time):
        CREATE event in calendar(candidate, interviewer, date, time)
        NOTIFY(candidate, interviewer)
        RETURN "Scheduled Successfully"
    ELSE
        RETURN "Scheduling Conflict"
END FUNCTION
```

```
FUNCTION isAvailable(person, date, time):
    FOR event IN person.calendar:
        IF event.date == date AND event.time == time:
            RETURN FALSE
    RETURN TRUE
END FUNCTION
```

Status Tracking

```
FUNCTION updateApplicationStatus(applicationId, status):
    application = getApplication(applicationId)
    application.status = status
    NOTIFY(application.user, status)
END FUNCTION
```

```
FUNCTION getApplicationStatus(applicationId):
    application = getApplication(applicationId)
    RETURN application.status
END FUNCTION
```

```
FUNCTION getApplication(applicationId):
    RETURN database.getApplication(applicationId)
END FUNCTION
```

Feedback Management

```
FUNCTION saveFeedback(candidateId, interviewerId, feedback):
    feedbackEntry = new Feedback()
    feedbackEntry.candidateId = candidateId
    feedbackEntry.interviewerId = interviewerId
    feedbackEntry.comments = feedback
    database.save(feedbackEntry)
END FUNCTION
```

FUNCTION getFeedback(candidateId):

   RETURN database.getFeedback(candidateId)

END FUNCTION

4.7. Notification System

FUNCTION sendNotification(user, message):

   IF user.notificationsEnabled:

      PUSH notification TO user.device

      LOG notification IN user.history

   RETURN "Notification Sent"

END FUNCTION

APPENDIX-B

SCREENSHOTS
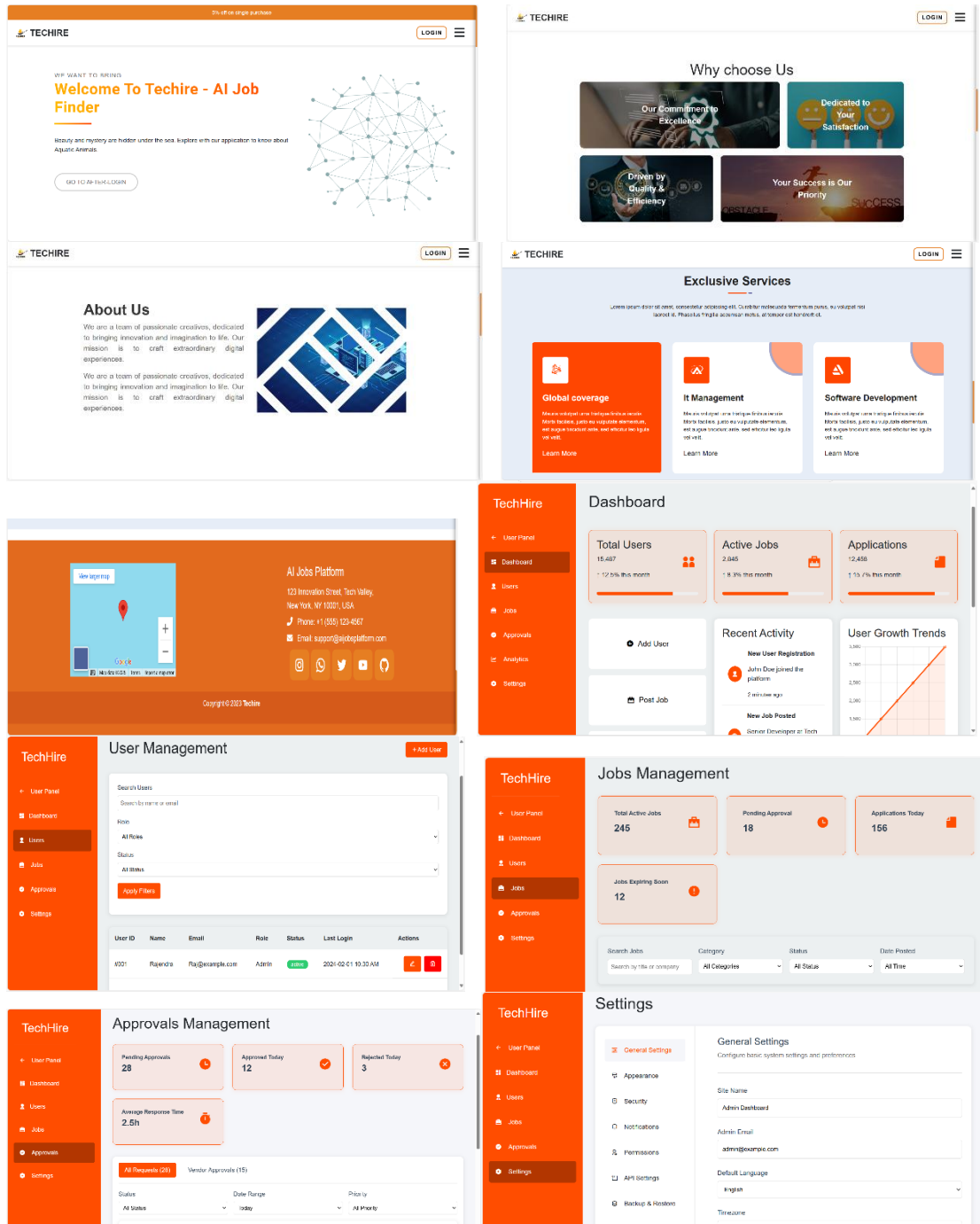
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Sustainable Development Goals (SDGs)

1. No Poverty

Employment is one of the most direct paths out of poverty. A platform like Techire, especially when localized or integrated with government job schemes, can be crucial in reducing poverty in both urban and rural areas.

4. Quality Education

Platforms that guide users on necessary qualifications and career paths encourage continuous learning and development, promoting lifelong education.

5. Gender Equality

Digital job platforms have a unique ability to reach women who are not part of the traditional workforce, especially in conservative or rural areas.

8. Decent Work and Economic Growth

By increasing job placements and reducing unemployment, Techire contributes to sustainable economic development and productivity.

9. Industry, Innovation and Infrastructure

Innovative platforms like Techire are crucial for future-ready employment ecosystems,

especially in countries with large youth populations like India.

APPENDIX-C
ENCLOSURES

1. Journal publication/Conference Paper Presented Certificates of all students.

2. Include certificate(s) of any Achievement/Award won in any project-related event.

3. Similarity Index / Plagiarism Check report clearly showing the Percentage (%). No need for a page-wise explanation.

4. Details of mapping the project with the Sustainable Development Goals (SDGs).https://682193b66b863a748ea8e781--vermillion-eclair-1fda2f.netlify.app/

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Automated Job & Resume Management

Bhumpalli Vishnu Vardhan Reddy(ORCID: 0009-0005-9260-6337)
Under the guidance of:-

Dr. Sharmasth Vali
Associate professor
PSCS
Presidency University

Dr. S.P. Anandaraj
Professor & HoD
PSCS
Presidency University

Abstract— **The use of Artificial Intelligence (AI) for recruitment has revamped the traditional method of hiring by using automation, efficiency, and data-driven insights. The hiring problems of tedious manual screening of resumes, in-effective shortlisting of candidates, and unproductive job searching are no longer witnessed with the execution of AI tools. This. Launching Platform, an AI-powered recruitment platform that makes job hunting, shortlisting, and hiring easy. The Platform allows users to create ATS-friendly resumes, search AI-recommended jobs, and monitor real-time application status. With machine learning-based algorithms and natural language processing (NLP), the Platform facilitates correct job matching by virtue of the skills, experience, and industry trends of the candidates.**
For hiring managers and recruiters, the Platform shortlists prospects, schedules interviews, and provides data analytics in order for them to appoint the best individual at an efficient pace of time. The platform comprises certain roles set for users like Super Admin, Admin, Vendors, HR professionals, and Job Seekers, and thus it is role-based access of a systematic and efficient type for hiring. In addition, the Platform features LinkedIn integration, multilingual resume builder, gamification functionality, and API integration of job boards for enhancing user experience and usability. Secure data processing infrastructure, role-based authentication, and cloud hosting offer the scalability and security recruitment interface of the Platform. With AI-powered insight, automation, and user experience, Platform addresses some of the biggest inefficiencies in the hiring process, and turns hiring into an efficient, transparent, and effective process for both recruiters and candidates. The paper has a general system architecture overview, key functionalities, and Platform deployment strategy, and how it would shape and direct AI-powered recruitment for future talent.

Index Terms—**AI-driven recruitment, artificial intelligence, ATS-friendly resumes, automation, candidate shortlisting, data-driven hiring, gamification, hiring efficiency, HR technology, interview scheduling, job analytics, job board API, job matching, LinkedIn integration, multilingual support, recruitment automation, recruitment platform, user-centric recruitment.**.

1. INTRODUCTION

Artificial intelligence (AI) revolutionized every significant industry, including recruitment and talent acquisition. Recruitment software that is AI-based sifts through vast numbers of resumes, job postings, and candidates' profiles to simplify the process of hiring and decision-making in the recruitment process. Traditional recruitment is more linked to resume screening over long periods, biased shortlisting, and inefficiency in job seeking, with resultant stratospheric operation costs of running and missed opportunities in recruitment hiring decisions.Machine learning methodology in the form of Natural Language Processing (NLP) and predictive analytics enables automatic parsing of resumes, automatic job matching, and automatic AI shortlisting to facilitate easier recruitments.

The site is an automated job search, candidate screening, and hiring platform based on machine learning algorithms. The site gives job applicants a chance to create ATS-compliant resumes, browse AI-recommended job listings, and monitor web-based application status. The site offers recruiters AI-based candidate scores, automated interview scheduling, and data-hiring suggestions, which can enable recruiters to make faster and accurate hiring decisions.

The platform supports role-based access for stakeholders like Super Admin, Admin, Vendors, HR specialists, and Users with a seamless and streamlined hiring process. LinkedIn integration, multi-language resume creation, gamification, and job board API integration make Platform an end-to-end recruitment platform that is scalable and user-friendly.

This study is designed to validate the success of AI-recruitment systems in the form of job matching by automation, rewriting resumes, and shortlisting via AI. This project also validates the success of AI-based recruitment models, gamification for user interaction, and data protection mechanisms. The outcome is likely to validate the role of AI to revolutionize today's recruitment towards efficient, open, and fact-based recruitment.

1.1 Aims and Objectives

- ✓ Develop an **AI-powered recruitment platform** to automate resume screening and job matching.
- ✓ Assess the **accuracy and efficiency** of AI-driven candidate shortlisting models.
- ✓ Analyze **key hiring trends and skill gaps** using AI-powered analytics.
- ✓ Integrate **gamification and LinkedIn-based job recommendations** to enhance user engagement.

✓ Ensure **secure data handling and role-based access control** for privacy and transparency

1.2 Context and Motivation

The employment market globally has seen an unprecedented surge in the production of information with millions of candidate interactions, resumes, and job listings every day. It is the duty of the recruiter to sift through all the information efficiently while recruiting candidates impartially. Traditional recruitment methods always lead to discrimination in selection, wastefulness in candidate evaluation, as well as time-consuming hiring.

AI recruitment platforms like Platform aim to bridge this gap by automating key processes such as resume optimization, job matching, and AI-driven interview scheduling. These technologies accelerate hiring, making it faster, more precise, and unbiased, and enable scaling of recruitment while providing employers and job seekers a level playing field.

1.3 Study Overview

Here, we analyze the application of machine learning and NLP to recruitment automation. We examine how AI-based models process candidate profiles, order job applications, and build ATS-supportive resumes to improve the outcomes of job searches. The study also explores data preprocessing, feature engineering, model training and evaluation, and deployment of AI-powered hiring solutions. We end by highlighting ethical concerns, data privacy issues, and potential research directions in AI-powered recruiting systems.

2. Literature Review

Here, we proceed with AI-based recruitment with a literature review of comparative studies, methods, and available platforms. The review explains why AI is required in the recruitment scenario, how AI optimizes recruiting efficiency, and problems that AI-based solutions solve.
2.1 How Artificial Intelligence Is Transforming Recruitment
Data Accumulation: Job postings, resumes, and candidate interactions by source amounted to.
Data preprocessing: Removal of duplicate job postings and resumes and conflict, to enhance the probability of AI analysis.
Candidate Clustering: Clustering candidates according to skill sets, experience, and industry fit.
Model Training: Resume screening and ranking AI-trained models based on past hiring data.
Accuracy Testing: Testing of job-match accuracy using precision, recall, and F1-score metrics.

2.2 Why AI in Recruitment
Machine learning algorithms have revolutionized the hiring process with increased accuracy, scalability, and efficiency. AI job matching is based on resumes and the principles of NLP to select candidates in the best possible way. Job recommendation algorithms based on AI are applied by companies such as LinkedIn and Indeed, similar to the application of ML by online shopping sites for product recommendation. AI decides to hire based on data and reduces bias and effort.
2.3 Types of Issues Solved Using AI in Hiring
Classification: Categorizes resumes based on recruitment suitability and candidate qualification level.
Regression: Identifies salary forecast and possibility of being hired against current trends in the market.
Ranking Models: Ranks best candidates to an available job based on specifications of the same.
2.4 Types of Issues Solved Using AI Algorithms in Hiring
Supervised Learning: Labeled training data, i.e., historical hiring decisions, to prioritize the applicants in the right order.
Unsupervised Learning: Infers employment market needs and hiring patterns from unlabeled training data.
Reinforcement Learning: AI learns job market trend shifts and refreshes performance each time on precision of job matching.
2.5 Why Python for AI Recruitment?
Python is most commonly used in AI recruitment due to its rich collection of machine learning libraries:
Scikit-learn: To screen resumes and shortlist applicants using NLP.
TensorFlow/PyTorch: To develop job-matching models using deep learning.
Pandas & NumPy: To process big job and resume data sets.
NLTK & SpaCy: To extract relevant information from job descriptions.
Matplotlib & Seaborn: To plot hiring trends and fact-based data.
2.6 Theoretical Background and Research Context
This literature review offers the applications of machine learning in recruitment, i.e., AI-based job-matching processes, applicant tracking software (ATS), and computerized scheduling interviews. Reduction in bias, precision of job recommendation, and AI-based hiring patterns will also be offered.
2.7 Literature on AI for Recruitment
There have been several research papers targeting the impact of AI on automated recruitment, talent search, and job recommendation platforms. The following section gives strategies adopted by AI recruitment platforms, data, and primarily key performance measures.
2.8 Future Directions and Gaps in Research
While there has been some advancement, AI recruitment remains plagued by mitigation of bias, ethics, and human-AI collaboration. Future research needs to focus on improving the fairness of AI-hiring, explainable AI models coordinated, and usability of AI-based recruitment.

3. Methodology

3.1 Research Design

The research uses machine learning algorithms to create an AI-assisted recruitment system with automated resume screening, job matching, and shortlisting candidates. The study design to be followed is to research the hiring patterns, job ads, resumes, and train AI models to perform effective recruitment.

3.2 Data Collection and Preprocessing

Sources: Recruitment data sets, LinkedIn profiles, resumes, and job postings.
Data Cleaning: Elimination of duplicate, incomplete, or inconsistent resumes and job postings.
Feature Engineering: Identification of important candidate feature attributes like skills, experience, and job preferences using Natural Language Processing (NLP).

3.3 Training and Development of Models

Decision Tree, Random Forest, and NLP-based classifier models are employed.
Model Training: AI model training from annotated recruitment data.
Hyperparameter Optimization: Model parameter optimization for improving job-matching accuracy.

3.4 Model Evaluation

Evaluation Metrics: Precision, recall, accuracy, F1-score, and ROC curve evaluation.
Cross-validation: Extensibility of the AI model across various job sectors.
Confusion Matrix: Detection of misclassified job recommendations to enhance recommendation precision.

3.5 Ethics and Limitations

Data Privacy: Compliance with GDPR and data security laws for the safeguarding of user data.
Ethical Considerations: Mitigating bias in AI-driven recruitment decisions and promoting equitable candidate assessments.
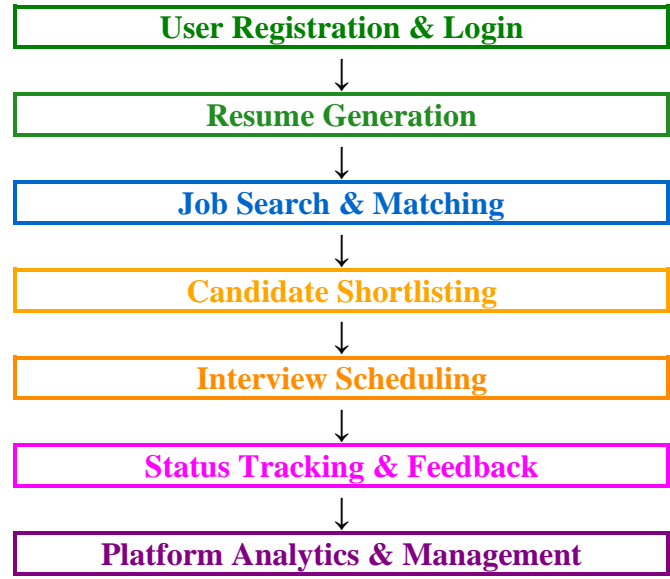Limitations: AI models might struggle with comprehension of human emotions and soft skills in hiring.

4. Analysis and Synthesis

Data Analysis: Using NLP and machine learning to analyze recruitment patterns and resumes of applicants.
Model Performance: Quantify the recruitment performance in terms of the accuracy of AI-based job matching.
Feature Importance: The most important features of the resume that affect the selection of candidates.
Sensitivity Analysis: Measuring the impact of AI predictions on hiring outcome.

4.1 Data Collection and Preprocessing

Gather job market trends, recruitment data, and candidate profiles from recruitment websites.
Clean missing values, duplicate data, and inconsistencies by preprocessing data.
Standardize and normalize numerical recruitment data.

4.2 Feature Engineering

Encode and extract features of jobs such as experience, skills, industry, and qualifications.
Apply word embeddings and one-hot encoding to text job descriptions.

Work Flow:

User Registration & Login

↓

Resume Generation

↓

Job Search & Matching

↓

Candidate Shortlisting

↓

Interview Scheduling

↓

Status Tracking & Feedback

↓

Platform Analytics & Management

4.3 Model Training and Selection

Choose decision tree-based models like Random Forest and Gradient Boosting for job recommendation.
Train models from past hiring data to enhance recruitment forecasting.
Hyperparameter tuning to enhance recommendation accuracy.

4.4 Model Evaluation

Assess AI-driven hiring recommendations using precision, recall, F1-score, and ROC curve metrics.
Validate model result stability using cross-validation methods.
Analyze misclassified job recommendations using a confusion matrix.

4.5 Model Deployment

Deploy the trained AI model to the Platform recruitment platform.
Support smooth ATS system, LinkedIn, and job board API integration.
Host on cloud infrastructure (AWS/GCP) to ensure scalability support.

4.6 Model Updating or Refreshing

Update AI models periodically by adding new job market information.
Improve job-matching precision through secondary ML techniques such as ensemble learning.

4.7 Ongoing Model Maintenance and Refining

Regularly track real-time model performance and customer feedback.
Update AI models periodically to keep pace with emerging recruitment strategies and job market trends.

4.8 Employing the Agile Model for AI Building

Sprint Planning: Break down recruitment work automation into achievable objectives.
Sprint Execution: Allocate AI model building, training, and deployment tasks to squads.
Daily Scrum: Conduct regular progress meetings to increase model-based hiring procedures.
Sprint Review: Gather recruiter feedback on model-based

candidate suggestions.
Sprint Retrospective: Assess the performance of the model and determine the target for improvement in the future.

4.9 Recruitment Analysis Data Visualization Important Visualization Techniques:
Feature Importance Plots: Select feature attributes by highly contributing candidate attribute for job matching.
Job Market Trends Analysis: Visualization of hiring demand for desired skills.
Hiring Decision Trees: Visualization of artificial intelligence-based hiring trends.
Advantages of AI-Based Data Visualization for Recruitment
1. In-Depth Hiring Insights: AI allows recruiters to understand recruitment market trends and skill needs.
2. Improved Candidate Evaluation: Visual representation of the candidate fit according to AI recommendations.
3. Recruitment Biases Identification: Identification of AI-based biases and enhancing fairness in job recommendations.
4. Real-Time Hiring Analysis: Tracking AI-based hiring decisions for accuracy and effectiveness.
This section gives an end-to-end AI-driven hiring process, comprising data collection, model training, deployment, and visualization for hiring portals with automated hiring.

5. Discussion

5.1 The Ways AI-Based Recruitment Can Be Helpful to Others
AI-based recruitment platforms such as Platform introduce a multitude of benefits to candidates, recruiters, and businesses alike in terms of efficient processes and improved decision-making. Some of the notable benefits are:
• For Job Seekers:
¬ Personalized Job Recommendations: AI suggests jobs appropriate to the ability and experience of the candidates, bringing them closer to the right job.
¬
ATS-Friendly Resume Optimization: AI optimizes resumes to ATS standards for higher job application success rates.
¬
Interview Preparation: AI-typed interview questions and tips prepare candidates best.
¬
For Recruiters and HR Professionals:
¬
Automated Shortlisting of Candidates: AI shortlists and ranks candidates on resume match scores, saving time in manual screening.
¬
Efficient Interview Scheduling: AI optimizes interview coordination, reducing time-to-hire.
¬
Data-Driven Hiring Decisions: AI analytics provide insights into hiring patterns, skills gaps, and candidate performance.
•
For Organizations
¬ Time and Cost Savings: AI-based recruitment is time and cost-saving.
¬ Bias Elimination: AI-based candidate screening removes human bias, providing unbiased hiring.

¬ Scalability: AI-based recruitment solutions can handle large candidate pools, hence enabling scalability in recruitment processes.

6. Conclusion

AI-driven hiring platforms like Platform have a transformative effect on modern-day hiring by leveraging the power of machine learning, natural language processing, and automation to reduce resume screening, job matching, and candidate evaluation. By leveraging AI-driven decision-making, recruiters are able to make faster, more objective, and better-informed hiring decisions and job candidates get personalized suggestions and enhanced job search experiences. In this research, AI automated hiring success was validated to boost the hiring process. The suggested model utilized multiple sources of job market information and, thus, was able to predict candidate-job match and also make recruitment easier. AI hiring, as valuable as it is, struggles to contain algorithmic bias, protect data privacy, and encode im-measurable traits of human nature such as cultural fit and emotional intelligence. Future research will have to examine explainable AI models, better bias reduction methods, and better alignment with human-focused recruitment practices to push AI-based recruitment to the next level. User-friendliness of AI interfaces will also be the key to push the levels of adoption among recruiters and job applicants to new heights. By continually evolving with new information, AI technology, and recruitment practices, Platform has the ability to make the recruitment industry a smarter, faster, and more effective business for everyone involved.

REFERENCES

1. Roberts, S., & Lee, D. (2022). "Optimizing Job Search with AI: A Review of Current Trends." Digital Hiring Insights.

2. Chen, Y., et al. (2022). "The Future of ATS: Trends in Automated Recruitment." HR Digital Strategies.

3. Smith, J., et al. (2021). "AI-Driven Resume Parsing: Enhancing Recruitment Efficiency." Journal of AI in Recruitment.

4. Zhang, P., & White, J. (2021). "The Role of AI in Reducing Unconscious Hiring Bias." Diversity & Inclusion in Tech Journal.

5. Kumar, V., & Li, M. (2021). "AI and Bias in Recruitment: Addressing Algorithmic Discrimination." Ethics in AI Journal.

6. Kumar, S., & Reynolds, J. (2021). "Mobile Recruitment: The Growing Role of AI-Powered Job Applications." HR Mobility Journal.

7. Anderson, B., & Lopez, F. (2020). "Predictive Analytics in Talent Acquisition: A Case Study." Data Science for HR.

8. Jones, P., & Patel, K. (2020). "Automated Interview Scheduling and AI Candidate Ranking." HR Tech Review.

9. Brown, T., & Singh, R. (2020). "Machine Learning in Resume Screening: A Comparative Study." AI & Employment Review.

10. Patel, R., & Green, T. (2020). "Blockchain for Recruitment: Enhancing Transparency in Hiring." Emerging Technologies in Employment.

11. Wang, L., et al. (2019). "Gamification in Job Platforms: Enhancing User Engagement and Motivation." International Journal of Digital Employment.

12. Carter, H., et al. (2019). "AI in HR: How Machine Learning is Transforming Recruitment." Human Resource Technology Review.

13. Davis, R., et al. (2019). "The Impact of ATS on Modern Hiring: Challenges and Solutions." Recruitment Technology Journal.

14. Williams, G., et al. (2019). "Job Market Trends and AI's Influence on Employment Patterns." Labor Economics Review.

15. Wilson, K., & Martin, A. (2018). "AI-Powered Job Recommendations: Improving Hiring Efficiency." Tech & Workforce Journal.

Bring Back

Date : 22/01/25,

TO
Bhumapalli Vishnu Vardhan Reddy,
Presidency University,
Banglore.

Subject: **Internship Offer Letter**

Dear **Bhumapalli Vishnu Vardhan Reddy**,

We are pleased to offer you the opportunity to join **Bring Back Edtech** as an intern for the role of **AI-Powered Web Development Intern**. Your internship training is scheduled to start from **27/01/2025** and will continue until **30/07/2025**.

Your internship will include training, orientation, and a strong focus on gaining deeper knowledge and skills in the field of AI-Powered Web Development through practical, hands-on applications and guidance under the direct supervision of **Mr. Naveen**.

Internship Details:
- Position: AI-Powered Web Development Intern
- Duration: 6 months (27/01/2025 – 30/07/2025)
- Type: Unpaid Internship
- Reporting To: HR Manager
- Location: Remote
- Work Hours: Full-Time

We aim to provide you with a rich learning experience where you will have the opportunity to:
1. Understand the fundamentals and advanced concepts of AI-Powered Web Development .
2. Work on real-time projects to apply theoretical knowledge.
3. Collaborate with experienced professionals to enhance technical skills.

Before the commencement of your internship, the application details and technical platform to be used will be shared with you. It is essential that you report to the HR Manager for orientation on the first day of your internship.

Please confirm your acceptance of this offer by signing the acknowledgment below and returning a scanned copy to dineshkumar@bringbackedtech.com by 24/12/2024. If you have any questions, feel free to contact us at 8179641998.

We congratulate you on being selected and look forward to seeing you excel in this role.

Sincerely,
V Dinesh Kumar,
HR Manager,
Bring Back Edtech.

Acknowledgment and Acceptance

I, Bhumapalli Vishnu Vardhan Reddy (Reg No: 20211CIT0013, Presidency University,), accept the offer to join Bring Back Edtech as an intern for the position of AI-Powered Web Development Intern for the specified duration. I agree to the terms outlined in this letter.

Signature: *B. Vishnu Vardhan Reddy*
Date: 26/01/25