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CareerCraft: Structuring Career Counselling in Higher Education

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Abstract: *CareerCraft is an intelligent web-based platform designed to support students in making informed career decisions by integrating career counseling, resume building, mentor interaction, and job recommendation services into a single system. In today's competitive environment, students often face challenges such as lack of proper guidance, difficulty in creating professional resumes, and limited access to mentors. The proposed system addresses these issues by providing a centralized and user-friendly solution. The platform enables users to create and manage professional resumes through structured templates and offers AI-based resume analysis to evaluate content quality, skills, and overall effectiveness. It identifies strengths and weaknesses in resumes and provides suggestions for improvement. Additionally, the system performs skill-based analysis to recommend suitable career paths and job opportunities based on user profiles. A dedicated mentor module allows students to connect with experienced professionals, schedule sessions, and receive personalized guidance. Developed using modern web technologies with a robust backend and database system, CareerCraft ensures efficient data handling and seamless user interaction. By combining automated analysis with human mentorship, the system reduces dependency on traditional counseling methods while providing instant, data-driven, and personalized career support. Overall, CareerCraft enhances employability by helping students build strong resumes, identify skill gaps, and make well-informed career choices.*

Keywords: Career Counseling, Resume Analysis, Resume Builder, Job Recommendation System, Mentor Interaction, Skill Gap Analysis, Career Guidance, Web-Based Application, Artificial Intelligence, Employability Enhancement, Decision Support System, Student Career Development.

I. INTRODUCTION

In today's rapidly evolving and highly competitive job market, students and graduates face significant challenges in choosing appropriate career paths, developing professional resumes, and securing suitable employment opportunities. Many individuals lack access to structured career guidance, resulting in confusion, poor decision-making, and underutilization of their skills and potential. Additionally, the absence of proper mentorship and personalized job recommendations further complicates the transition from academic life to professional careers [1].

Traditional career counseling methods are often limited, time-consuming, and not easily accessible to all students. Moreover, existing online platforms typically focus on isolated functionalities such as resume building or job searching, without providing a comprehensive solution that integrates multiple career development services. This creates a gap where students must rely on multiple tools, leading

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to inefficiency and lack of cohesive guidance [2].

To address these challenges, CareerCraft: Structuring Career Counselling in Higher Education is proposed as an integrated, web-based platform that combines career counseling, resume creation, resume analysis, mentor interaction, and job recommendation into a single system. The platform is designed to provide a centralized and user-friendly environment where students can build professional resumes, receive AI-based feedback, and explore suitable career opportunities based on their skills and interests [3].

The system incorporates intelligent features such as resume evaluation, skill gap analysis, and personalized job recommendations to guide users toward better career decisions. In addition, the mentor interaction module enables students to connect with experienced professionals, thereby enhancing the quality of guidance through human expertise. By leveraging modern web technologies and smart analytical techniques, CareerCraft aims to simplify the career development process and make it more accessible, efficient, and data-driven [4].

Overall, the proposed system seeks to empower students by improving their employability, enhancing their resume quality, and providing structured career guidance, ultimately bridging the gap between academic preparation and industry requirements [5].

II. LITERATURE ANALYSIS

The literature review consolidates four notable studies on resume analysis and career guidance, highlighting the methods and future directions for each. The works cover a range of approaches, from NLP and machine learning classifiers for skill extraction and job role prediction, to AI-powered multi-agent systems incorporating semantic matching, emotion-aware feedback, and reinforcement learning for adaptive career guidance.

More recent studies leverage Large Language Models (LLMs) for structured resume evaluation, ATS compatibility assessment, and trending skill identification, while others focus on domain-specific resume categorization and dynamic candidate-job matching. Across these studies, future scopes emphasize improving model accuracy through multilingual support, real-time integration with job portals, personalized skill development suggestions, and advanced AI techniques to reduce bias and enhance reliability. Collectively, these works demonstrate the evolving landscape of automated resume analysis and its potential to optimize recruitment processes..

TABLE I: LITERATURE WORK

Author and Year	Methods	Future Scope
R. Pradeepa, A.C. Charumathi, R. Siva, S.I. Unais Sulthan, B. Vishnukumar [1]	Resume analysis using Natural Language Processing (NLP) Machine Learning classifier for job role prediction Text extraction to identify skills, education, experience, and personal information	Integrate advanced AI models for more accurate role prediction support multiple languages and international resume formats include dynamic learning to update classifier with new job roles Add real-time career trend analysis

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	Resume scoring system based on relevance and accuracy	and personalized skill development suggestions Integration with job portals for direct application support
Somesh Nandi, Mohit M., B. Aishwarya Nayak, B. Sathish Babu [2]	AI-powered career guidance using multi-agent hybrid architecture Semantic matching with Sentence-BERT (SBERT) Emotion-aware feedback using VADER sentiment analysis Job trends analysis via Naukri API Knowledge graph for explainable AI Reinforcement Learning (RL) for adaptive recommendations Voice assistant supporting English, Hindi, Kannada	Expand multilingual support to more Indian and global languages Integrate additional real-time job portals and labor market data Improve emotional intelligence for better personalized counseling Enhance RL layer for long-term career trajectory modeling Incorporate AI-driven resume evaluation and skill-gap analysis for full career support
Gayatri Hendre, Sakshi Bhiware, Alisha Darwajkar, Prof. A.S. Mali (2025) [3]	Intelligent resume evaluation using Large Language Model (LLM) Mistral-7B-Instruct-v0.2 Extraction of structured data from PDF resumes Assessment of ATS compatibility Identification of trending skills based on candidate profile Recommendations for relevant industry certifications Multi-stage framework: text extraction → fprompt engineering → LLM inference → structured output	Fine-tune custom LLMs on curated resume and job datasets to improve accuracy Integration with live job board APIs for real-time analysis Expanding support for multilingual resumes Reduce AI hallucinations and improve reliability Incorporate more personalized career advice and skill development suggestions
Prof. Vaishali Jabade, Aaditi Tibhe, Amit Sharma, Pravin Agarwal [4]	Resume analysis using NLP and Machine Learning Text extraction from PDFs and structured processing Named Entity Recognition (NER) to identify skills and experience Resume categorization into domains (Data Science, Web Dev, Android, UI/UX) Dynamic resume scoring and candidate-job matching - Web-based interface for recruiters and candidates	Expand dataset size for more accurate domain classification Integrate real-time ATS compatibility scoring. Enhance skill extraction using advanced NLP models. Include multilingual support for global resumes Add automated suggestions for learning resources and certifications based on skill gaps

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III. WORKING METHODOLOGY

The CareerCraft system follows a structured and modular methodology to provide efficient career counseling, resume evaluation, mentor interaction, and job recommendations. The workflow is designed to ensure smooth user interaction and accurate analysis through multiple stages.

1. **User Registration and Authentication**
   - The process begins with user registration and login.
   - New users create an account by providing basic details such as name, email, and password.
   - Existing users can securely log in to access the system.
   - Authentication ensures data privacy and personalized user experience.

2. **Profile Creation:** After login, users create their profiles by entering relevant information, including:
   - Educational qualifications
   - Technical and soft skills
   - Projects and certifications
   - Work experience (if any)

   This information serves as the foundation for resume generation, analysis, and recommendations.

3. **Resume Creation (Resume Builder)**
   - The system provides a structured resume builder with predefined templates.
   - Users can input their details into organized sections such as education, skills, projects, and experience.
   - The system automatically formats the resume into a professional layout.
   - Users can view, edit, and update their resumes at any time.

4. **Resume Analysis (AI-Based Evaluation)**
   - Once the resume is created, the system performs intelligent analysis.
   - The resume is evaluated based on structure, content quality, and completeness.
   - Key parameters include skill relevance, keyword presence, formatting, and section coverage.
   - The system generates a resume score and provides feedback highlighting strengths and areas for improvement.

5. **Skill Gap Analysis**
   - The extracted user data is compared with predefined job role requirements stored in the database.
   - The system identifies missing or partially matched skills.

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- It categorizes skills into strong, moderate, and weak areas.
- Suggestions are provided, including recommended courses, certifications, and learning paths.

6. Career Guidance Module

- Based on user profile and analysis results:
- The system suggests suitable career paths aligned with user interests and skills.
- It provides insights into industry requirements and growth opportunities.
- Personalized recommendations help users plan their career effectively.

7. Job Recommendation Engine

- The system matches user profiles with job roles using rule-based or AI-based logic.
- A matching score is calculated for each job role.
- The most relevant job opportunities are displayed to the user.
- Recommendations are based on skills, education, and resume content.

8. Mentor Interaction and Booking

- The platform allows users to connect with mentors for expert guidance.
- Users can view mentor profiles and available time slots.
- They can book sessions based on availability.
- Mentors can manage schedules and interact with students, providing personalized advice.

9. Admin and System Management

- The admin module ensures smooth system operation.
- Admins manage users, mentors, and system data.
- They monitor activities and maintain system security.
- Access control and database management are handled efficiently.

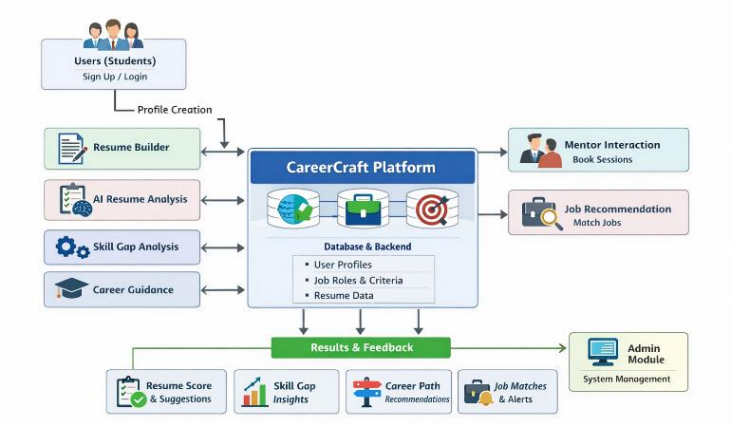

Figure 1: System Diagram

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10. **Result Generation and Feedback**
    - Finally, the system presents consolidated results to the user, including:
    - Resume score and improvement suggestions
    - Skill gap analysis
    - Career guidance recommendations
    - Job suggestions with matching scores

IV. RESULTS AND DISCUSSION

The CareerCraft system was successfully designed and implemented as an integrated platform for career counseling, resume building, mentor interaction, and job recommendation. The system was tested with multiple users, including students from different academic backgrounds, to evaluate its effectiveness and performance.

1. **System Performance and Implementation:** The system demonstrated stable performance with seamless integration of all modules, including User, Admin, and Mentor functionalities.
    - Users were able to register, log in, and navigate the platform without difficulty.
    - The system responded efficiently to user inputs, ensuring smooth interaction.
    - Data storage and retrieval using the MySQL database were accurate and reliable.

2. **Resume Builder and Evaluation Results:** The Resume Builder module enabled users to create structured and professional resumes.
    - Users with limited knowledge of resume formatting successfully generated well-organized resumes.
    - The Resume Analysis feature evaluated resumes based on structure, skills, and completeness.
    - The system provided scores and feedback, helping users identify missing sections such as projects, certifications, or technical skills.
    - Improvement suggestions led to noticeable enhancement in resume quality after updates.

3. **Career Guidance and Skill Gap Analysis:** The system effectively analyzed user profiles to provide personalized career guidance.
    - Skill gap analysis identified missing or weak skills required for specific job roles.
    - Users received recommendations for courses, certifications, and learning paths.
    - This feature helped users understand industry requirements and plan their career development accordingly.

4. **Job Recommendation Effectiveness:** The Job Recommendation Engine matched user profiles with relevant job roles.
    - Suitable job opportunities were suggested based on user skills and educational background.

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- Matching scores allowed users to evaluate their eligibility for different roles.
- The recommendations improved user awareness of career options and job market expectations.

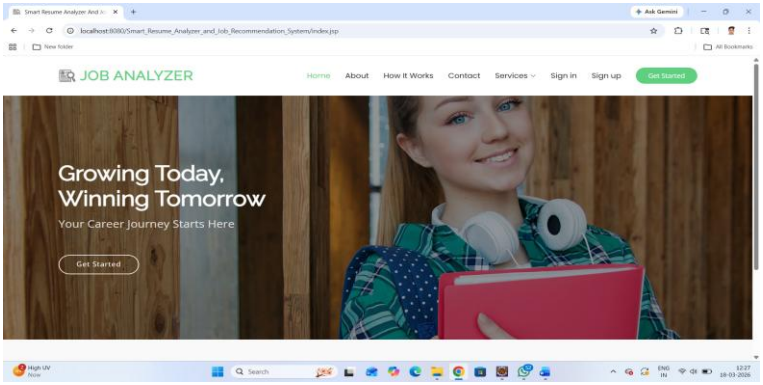
5. **Mentor Interaction Outcomes:** The Mentor Module provided an effective platform for communication between students and professionals.
   - Users were able to book mentoring sessions easily based on available time slots.
   - Mentors managed their schedules and provided personalized guidance.
   - This interaction enhanced the overall effectiveness of the system by combining automated and human support.

6. **User Experience and Usability:** The system offered a user-friendly interface with clear navigation across modules.
   - The step-by-step workflow (Profile → Resume → Analysis → Recommendation) was easy to understand.
   - Users experienced reduced complexity in career planning and resume creation.
   - The centralized platform eliminated the need for multiple external tools.

7. **Discussion:** The results indicate that CareerCraft successfully addresses the limitations of traditional career counseling systems by providing a centralized and intelligent solution. The system offers:
   - Instant and automated career guidance
   - Personalized resume feedback
   - Data-driven job recommendations
   - Direct mentor interaction

   However, certain limitations were observed:
   - The accuracy of resume analysis depends on predefined rules and input data quality
   - Lack of real-time integration with external job portals
   - Limited use of advanced AI techniques such as NLP and machine learning

Home Page



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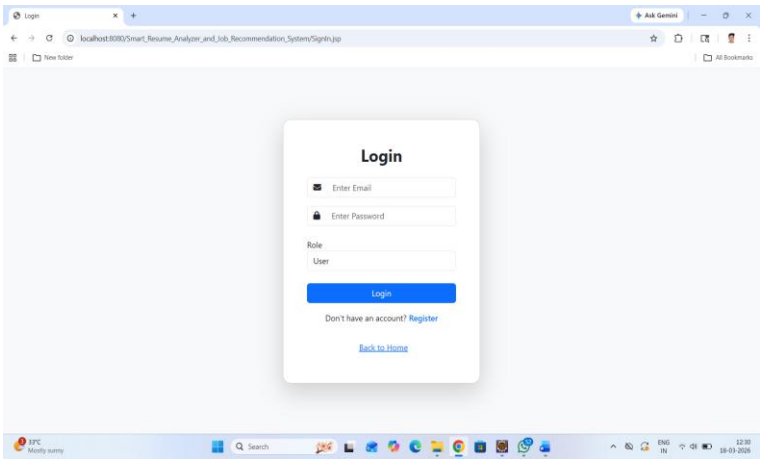
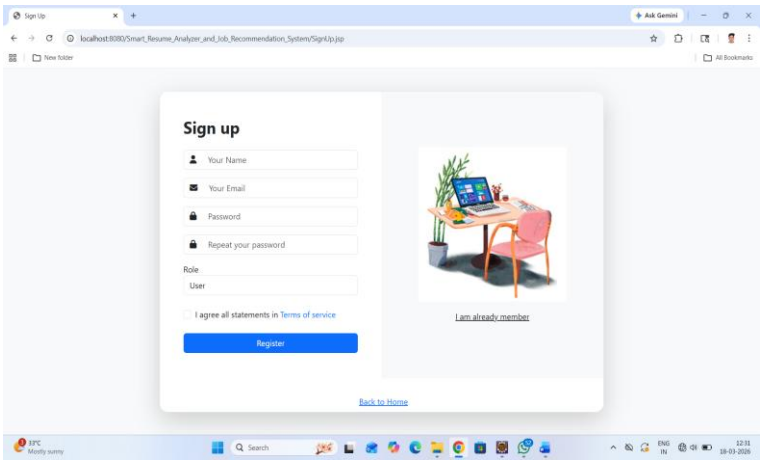
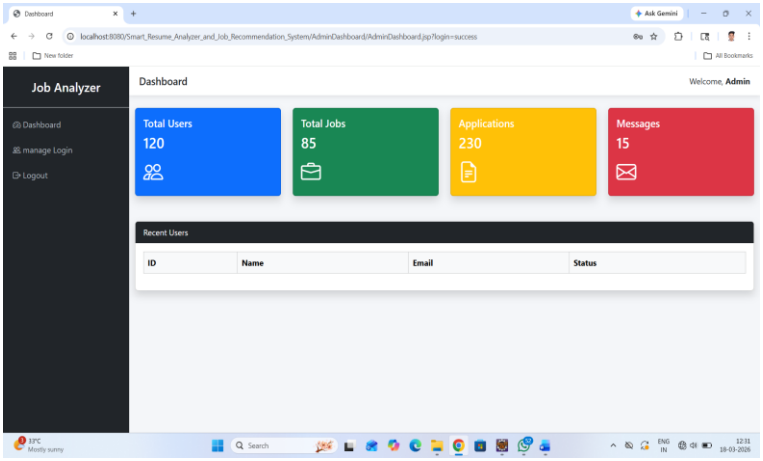
Sing In



Sign Up



Admin Dashboard



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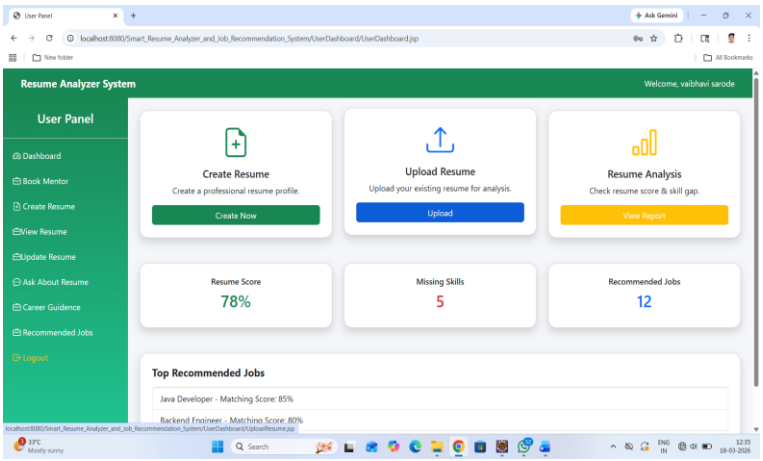
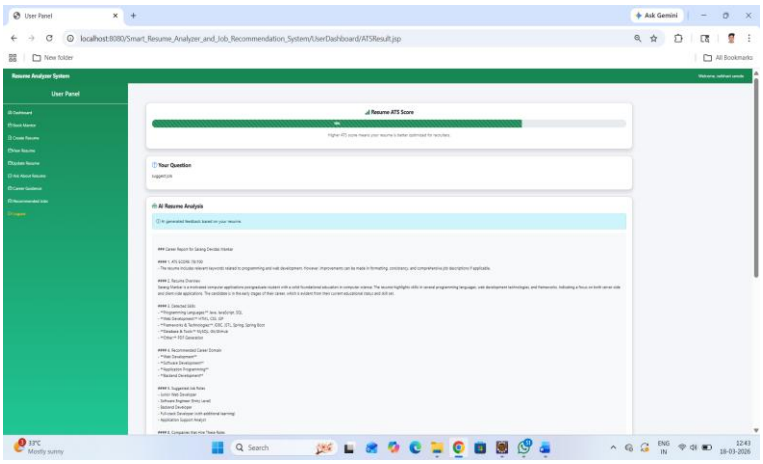
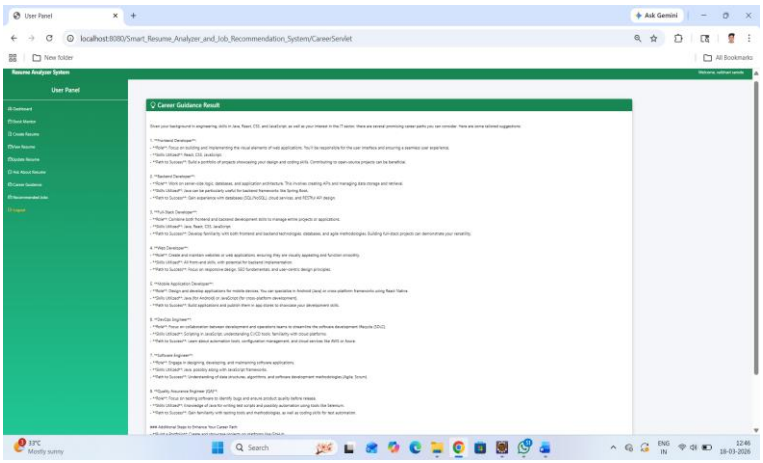
User Dashboard



Analyze Resume





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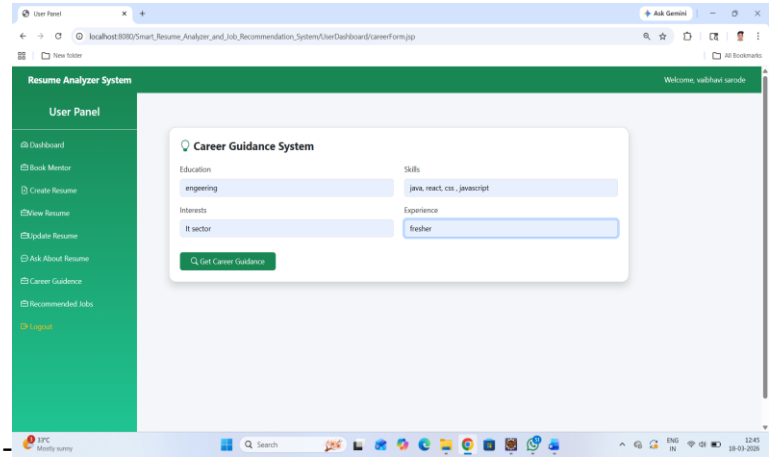
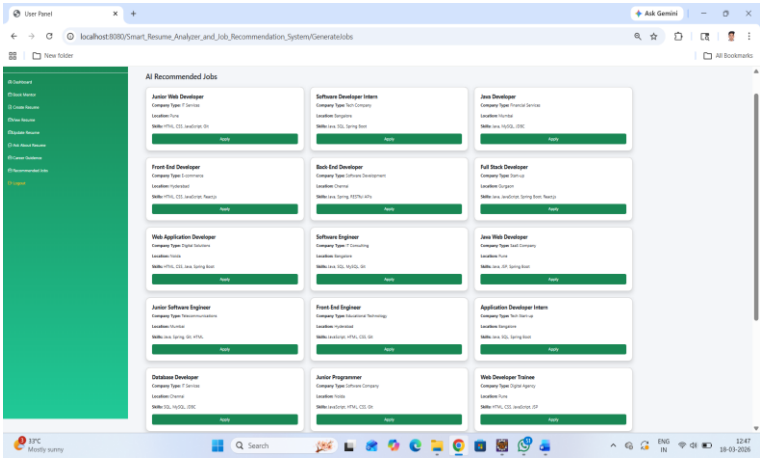
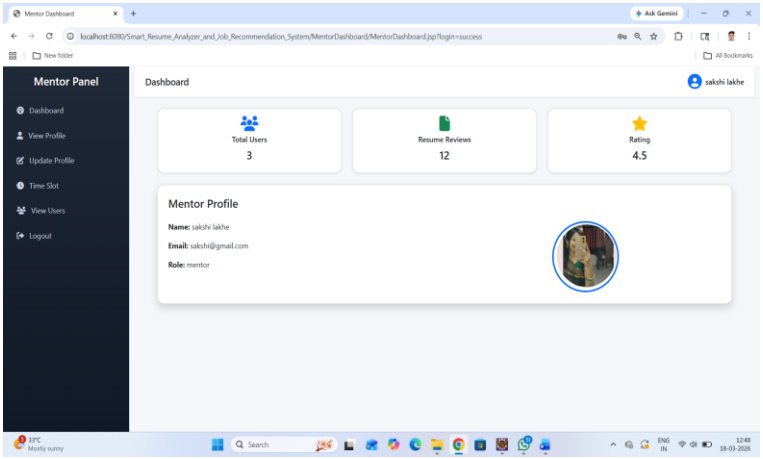
Career Guidance



Job Recommendation



Mentor DashBoard



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V. CONCLUSION

The CareerCraft: Structuring Career Counselling in Higher Education system presents an effective and integrated solution to the challenges faced by students in career planning, resume building, and job selection. In a competitive job market where proper guidance and structured support are often lacking, the system successfully combines multiple functionalities into a single, user-friendly platform. The implementation of modules such as resume builder, resume analysis, career guidance, mentor interaction, and job recommendation demonstrates how technology can streamline and enhance the career development process. The system enables users to create professional resumes, identify their strengths and weaknesses, and receive personalized suggestions for improvement. Additionally, the skill gap analysis and job recommendation features help users align their profiles with industry requirements, thereby improving their employability.

One of the key strengths of CareerCraft is the integration of automated analysis with human mentorship, allowing users to benefit from both data-driven insights and expert guidance. This hybrid approach ensures more accurate and meaningful career support compared to traditional methods.

However, the system has certain limitations, such as dependency on predefined rules and lack of real-time integration with external job platforms. Future enhancements can focus on incorporating advanced technologies like Artificial Intelligence, Machine Learning, and Natural Language Processing to improve analysis accuracy and adaptability. Expanding the system with multilingual support and live job market integration can further increase its effectiveness and reach.

In conclusion, CareerCraft serves as a comprehensive and intelligent career counseling platform that simplifies decision-making, enhances resume quality, and supports students in achieving their professional goals. It has significant potential to transform career guidance in higher education by making it more accessible, efficient, and personalized.

REFERENCES

[1] Collobert, R., Weston, J., Bottou, L., Karlen, M., Kavukcuoglu, K., and Kuksa, P.: Natural Language Processing (Almost) from Scratch, arXiv repository.

[2] Zu, S., Wang, X., and Darren, S.: Resume Information Extraction with A Novel Text Block Segmentation Algorithm.

[3] Gan, C., and Mori, T.: A Few-Shot Approach to Resume Information Extraction via Prompts.

[4] Agrawal, R.: Must-Know Techniques for Text Preprocessing in NLP. 2021, Analytics Vidhya.

[5] Bhatia, V., Rawat, P., Kumar, A., and Shah, R. R.: End-To-End Resume Parsing, Candidate Search IJIRT 187921 for a Job Description Using BERT, arXiv preprint.

[6] Chavan, J.: NLP Tokenization, Stemming, Lemmatization, Bag-Of-Words, 2020, Medium.

[7] Chen, J., Gao, L., and Tang, Z.: Information Extraction from Resume Document in PDF, 2016.

[8] Kopparapu S. K.: Automatic Extraction of Usable Information from Unstructured Resumes to Aid Search, IEEE Xplore, 2015.

[9] Young, M.: The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989. [10] Zhang, X., Li, Y., Shen, R., and Zhu, F.: A BERT based Joint Learning Approach for Resume Parsing, IEEE Access, vol. 9, pp. 104453 104462, 2021.

[10] Sayfullina, N., Malmi, E., Liao, Y., and Jung, A.: Domain Adaptation for Resume Classification Using Convolutional Neural Networks, in International Conference on Analysis of Images, Social Networks and Texts, Springer, 2018, pp. 82–93.

[11] Kumar, A., Singh, A., Gupta, J., and Parmar, P.: Intelligent Resume Parsing System Using Natural Language Processing and Machine Learning, Int. J. of Advanced Computer Science and Applications, vol. 12, no. 6, pp. 612–619, 2021.

[12] Liu, J., Chen, Y., Cheng, K., and Zhang, J.: DeepResume: A Deep Learning-Based Resume Parsing and Standardization Framework, in IEEE International Conference on Big Data, 2020, pp. 5773–5775.

