



AI - Enhanced Online Resume Builder

**Mr.N.KUMAR M.Sc.,M.Phil¹, Ms.D.Janaranjani², Mr.J.Janarthan³, Ms.B.Jaya shree⁴,
Ms.S.Kaaviya⁵**

Assistant Professor (Sg), Department of Computer Science, Dr .N .G .P .Arts and Science College, Coimbatore¹

B. Sc Computer Science, Department of Computer Science, Dr .N .G .P .Arts and Science College, Coimbatore^{2,3,4,5}

Abstract: In today's competitive employment landscape, crafting a professional and impactful resume is crucial for job seekers aiming to secure interviews and career opportunities. However, many individuals face challenges in creating resumes that effectively communicate their skills, qualifications, and experiences. This paper introduces an AI-powered online resume builder developed using PHP, MySQL, HTML, CSS, JavaScript, and the ChatGPT API. The system is designed to streamline the resume-building process by offering real-time suggestions, intelligent content recommendations, and formatting assistance tailored to specific job roles and industry standards.

By integrating the capabilities of ChatGPT, the system enables users to receive personalized guidance in crafting compelling resumes with optimized content. The AI assistant assists in generating professional summaries, refining skill descriptions, and incorporating relevant keywords that align with the job market demands. The platform supports multiple resume templates and ensures usability for users from diverse backgrounds, including non-technical individuals.

The paper details the system architecture, frontend and backend technologies, database design, and AI integration. User testing and feedback highlight significant improvements in both the quality and efficiency of resume creation compared to traditional methods. The findings support the effectiveness of AI-assisted resume generation in enhancing user satisfaction and the potential for broader applications in career development tools. Future enhancements aim to incorporate AI-driven resume scoring, multilingual support, and integration with recruitment platforms to expand the system's functionality and accessibility.

I. INTRODUCTION

In the digital age, the job market has grown increasingly competitive, requiring applicants to present well-organized, appealing, and content-rich resumes that stand out to potential employers. A resume not only acts as a formal representation of one's professional background but also as a personal marketing tool that determines the likelihood of securing an interview. Despite the importance of resumes, many job seekers—especially fresh graduates and non-technical individuals—struggle to construct effective resumes due to limited experience with design, language, and strategic content placement.

Traditional resume builders offer static templates with basic formatting options but often fail to provide dynamic content suggestions or real-time improvements tailored to the specific needs of the user. As artificial intelligence (AI) continues to transform various aspects of our digital lives, it offers a new frontier in career development tools. Integrating AI into resume-building platforms introduces the potential to not only guide users through the structure and formatting of resumes but also provide intelligent, role-specific content generation and optimization.

This paper presents an AI-integrated online resume builder that utilizes PHP for backend processing, MySQL for data storage, and HTML, CSS, and JavaScript for frontend design, while leveraging the ChatGPT API to power AI-assisted functionality. The platform enables users to build personalized, optimized resumes efficiently by suggesting content for each resume section—such as summaries, experience descriptions, and skill highlights—based on the job role selected. The AI assistant also provides grammar correction, keyword optimization, and customization options, making the resume more appealing to recruiters and applicant tracking systems (ATS).

With features such as real-time editing, downloadable formats, and template customization, the system addresses the common limitations of existing tools. Through testing and user feedback, the proposed solution has shown to significantly improve both the speed and quality of resume creation. By bridging the gap between AI capabilities and career-building utilities, this platform stands as a novel approach to helping users achieve professional success more effectively.



II. LITERATURE REVIEW

The concept of online resume builders has evolved with technological advancements, enabling users to create structured and visually appealing resumes without specialized design skills. Traditional platforms such as Zety, ResumeGenius, and Canva provide pre-designed templates and step-by-step guidance. While these tools assist in layout and formatting, they lack dynamic content generation tailored to individual users' profiles and job goals.

In recent years, the integration of artificial intelligence and natural language processing (NLP) has opened new pathways for enhancing resume writing tools. Studies like those by Huang et al. (2020) highlight the benefits of AI in improving the coherence and personalization of professional documents. AI-powered tools such as Rezi and Resume.io have begun using keyword optimization techniques to improve ATS (Applicant Tracking System) compatibility, yet these systems often rely on rigid patterns or limited templates.

Despite these improvements, few existing platforms offer real-time, conversational AI assistance to help users generate and refine resume content based on specific job roles. The emergence of models like ChatGPT, developed by OpenAI, provides new opportunities for creating intelligent systems capable of engaging with users in natural language and offering contextual guidance.

The proposed system bridges this gap by integrating the ChatGPT API into the resume-building workflow. This allows for a dynamic, personalized experience where the AI assistant not only guides users in structuring their resumes but also contributes meaningful content suggestions, grammar corrections, and industry-specific optimizations. This novel approach positions the platform as an innovative advancement in the field of career development tools, offering deeper user engagement and more impactful resume outcomes.

III. PROPOSED SYSTEM

The proposed system is a comprehensive online resume builder that integrates artificial intelligence to assist users in creating professional, tailored resumes. It consists of a frontend interface, backend logic, and a database, all working in conjunction with the ChatGPT API to enhance the user experience.

Frontend Design

The frontend is developed using HTML, CSS, and JavaScript. It offers a user-friendly interface where users can select templates, input personal details, and receive real-time suggestions. Users can interact with the AI assistant via a chatbot-like interface to get guidance on resume content, section formatting, and job-specific customization.

Backend and Database

The backend is built with PHP, responsible for handling user requests, managing sessions, and interacting with both the database and the ChatGPT API. MySQL is used as the database to store user profiles, resume data, and customization preferences. Key tables include users, resumes, experience, education, and skills.

AI Integration with ChatGPT API

A standout feature of the system is the integration of OpenAI's ChatGPT API, which adds a layer of intelligence to the resume-building process. Key functionalities include:

- **Conversational Interaction:** The AI communicates with users in a conversational manner to collect information.
- **Content Suggestions:** Based on the job role selected, the AI suggests tailored summaries, experience descriptions, and skill sets.
- **Grammar and Tone Correction:** The AI reviews user input and suggests improvements for clarity and professionalism.
- **Keyword Optimization:** The assistant suggests keywords aligned with industry standards and applicant tracking systems (ATS).
- **Dynamic Adaptation:** The AI can dynamically adjust suggestions based on user feedback or changes in selected job roles.

IV. IMPLEMENTATION

The system is developed using PHP and MySQL for backend, with HTML, CSS, and JavaScript for frontend. ChatGPT API is integrated for AI assistance, enabling:



- User queries processing
- Content recommendations for resume sections
- Automated generation of summaries and skill suggestions
- Grammar correction and keyword optimization

The frontend provides a responsive interface for inputting resume details and selecting templates. The backend manages user sessions, stores data securely, and interacts with the AI API. The database is structured to store user details, education, experience, skills, and project data. Users can download the final resume in a professional template as a PDF. This implementation showcases how AI integration streamlines and enhances the resume-building process.

V. RESULTS & DISCUSSION

The AI-integrated resume builder system was tested with a variety of user inputs and job roles to assess functionality, usability, and performance. The results indicate that the integration of ChatGPT significantly improves the user experience by providing real-time content suggestions and reducing manual effort in resume writing.

Key Results:

- Users were able to create complete, professional resumes in less time compared to traditional tools.
- AI-assisted suggestions for summaries and skill sections were accurate and relevant to the selected job roles.
- The resume download feature worked seamlessly, delivering properly formatted PDF files.

Discussion:

The system effectively bridges the gap between manual resume creation and AI-driven automation. It supports users with limited writing skills by offering grammatically correct, job-specific content. The ChatGPT API proved to be a valuable integration, as it dynamically adjusts its recommendations based on user input and role selection. This adaptability makes the system scalable and useful for a wide range of users, from students to professionals.

Overall, the project demonstrates how AI can enhance productivity and personalization in resume building, offering a smart and user-friendly solution for career development.

VI. EXISTING SYSTEM VS PROPOSED SYSTEM

Traditional resume-building platforms often require users to manually input data, rely on pre-defined templates, and lack intelligent support features. Users may struggle with formatting, content creation, and tailoring resumes for specific job roles. The proposed system addresses these limitations by incorporating AI-powered features such as personalized recommendations, automated skill and summary generation, and intelligent keyword suggestions. The integration of the ChatGPT API provides users with real-time assistance, making the process faster, more accurate, and accessible even for those with minimal writing skills.

Feature	Existing	Proposed
Input	Manual	AI-assisted
Personalization	Limited	Job-role specific
Guidance	None	Real-time AI help
Quality	Depends on user	AI-enhanced content
Output	Basic resume	Professional, optimized PDF

VII. CONCLUSION

The AI-integrated online resume builder significantly enhances the resume creation process by combining traditional web technologies with the power of artificial intelligence. By utilizing PHP, MySQL, HTML, CSS, and JavaScript alongside the ChatGPT API, the system offers real-time assistance, personalized content, and professional formatting. It reduces the effort and time required for users to create impactful resumes, especially for those with limited writing experience. The intelligent features such as automated summaries, skill suggestions, and grammar correction make the platform user-friendly, efficient, and highly adaptable for different job roles. This system demonstrates how AI can be effectively used to solve real-world problems and improve digital user experiences.



VIII. FUTURE WORK

In the future, the system can be enhanced by incorporating advanced features such as multi-language support to cater to a global audience and integration with job portals for seamless application processes. AI capabilities can be expanded to include resume ranking based on job descriptions and real-time feedback on resume strength. Mobile application development can further increase accessibility, allowing users to build resumes on the go. Additionally, user analytics can be implemented to provide insights into commonly used templates, keywords, and job preferences, helping improve personalization even further. Continuous improvements in AI models can also enable deeper context understanding, making the assistant more accurate and interactive.

REFERENCES

- [1]. Brown, T. B., et al. (2020). *Language Models are Few-Shot Learners*. In *Advances in Neural Information Processing Systems*, 33, 1877–1901. <https://arxiv.org/abs/2005.14165>
- [2]. OpenAI. (2023). *ChatGPT API Documentation*. Retrieved from <https://platform.openai.com/docs>
- [3]. Rashid, A., & Ahmed, T. (2021). *Smart Resume Builder Using NLP and Machine Learning*. In *International Journal of Advanced Computer Science and Applications (IJACSA)*, 12(3), 456–461.
- [4]. Sharma, R., & Gupta, V. (2022). *AI-Based Resume Screening and Evaluation*. *International Journal of Engineering Research & Technology (IJERT)*, 11(5), 88–93.
- [5]. W3Schools. (2023). *PHP and MySQL Web Development Guide*. Retrieved from <https://www.w3schools.com>
- [6]. MDN Web Docs. (2023). *HTML, CSS, and JavaScript Reference*. Retrieved from <https://developer.mozilla.org>
- [7]. Kumar, S., & Mehra, S. (2020). *Integration of AI in Web-Based Applications*. *Journal of Computer and Information Sciences*, 18(2), 120–128.