JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Interview Xpert: AI Platform for Mock Interviews, Resume Builder and Portfolio Builder

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***Abstract*—In today's competitive job market, preparing for interviews, creating compelling resumes, and showcasing work through portfolios are essential steps for career success. This project proposes an AI-driven platform designed to support job seekers and students in mastering these critical components. The platform integrates three primary modules: a Mock Interview AI, a Resume Builder, and a Portfolio Builder, each powered by artificial intelligence to offer personalized, data-driven guidance and real-time feedback. The Mock Interview AI module simulates interview scenarios, adapting questions based on the user's target industry and role. Using natural language processing (NLP) and machine learning, it evaluates responses, offering feedback on aspects like content relevance. The module also provides a score and rating to help users improve non-technical competencies. It makes use of text-to-speech conversions in order to stimulate those interviews. The Resume Builder utilizes AI to analyze job descriptions and optimize user resumes by recommending tailored content, keywords, and phrasing. The platform identifies skill gaps, suggests improvements based on industry best practices, and incorporates ATS (Applicant Tracking System) compatibility features to increase the chances of passing initial resume screenings. The Portfolio Builder aids users in creating visually engaging and content-rich portfolios. Using computer vision and NLP algorithms, it provides insights into portfolio structure, aesthetics, and presentation style. The AI can guide users on curating and showcasing projects to stand out. This platform represents a comprehensive, AI-augmented solution for professional development, aiming to empower job seekers with the tools to navigate the recruitment process with confidence and showcase their skills effectively. Through a seamless and interactive experience, the platform is expected to significantly enhance career readiness and user success in the job market.**

***Index Terms*— Artificial intelligence model, Natural language processing, Applicant tracking system, Portfolio, Resume, AI interviews**

INTRODUCTION

The AI-powered platform for mock interviews, resume building and portfolio building is an innovative solution designed to help job seekers and professionals enhance their career readiness and present themselves effectively to potential employers. By integrating cutting-edge technologies, this platform provides personalized, real-time assistance tailored to individual needs, ensuring users can confidently navigate the job market.

Problem Statement**:**

Job seekers often struggle with personalized interview preparation, portfolio creation, and resume building using traditional methods. Thus, an AI-driven solution will optimize the entire process and offer tailored, efficient tools for effective career preparation.

Motivation:

In a rapidly evolving job market, standing out among qualified candidates has become increasingly challenging. Traditional job preparation tools often fall short in addressing the specific needs of today's job seekers, especially those entering

competitive fields or applying for highly technical roles. With the rise of automation in recruiting and the increased use of digital platforms for hiring, candidates are expected to present well-structured resumes, demonstrate interview readiness, and showcase relevant work in a professional portfolio. However, many job seekers lack the resources or guidance to effectively prepare in all these areas, creating a demand for accessible, integrated solutions.

Objectives:

- To create an AI platform that helps a job seeker prepare extensively for their upcoming job interviews.
- To design the platform that considers each user's specific requirements when appearing for interviews and while designing portfolios and resumes.
- To build a prototype of the AI platform, complete with its structure, software foundation and its interfaces.

Key Features:

1. Interview Preparation Challenges:

Mock interviews are a proven method for building confidence and refining interview skills, yet they often require access to experienced mentors or hiring managers. With recent advances in AI, particularly in natural language processing (NLP) and sentiment analysis, there is now potential to simulate realistic interview experiences that provide structured feedback. Such AI-powered mock interview tools can help candidates practice answers, receive immediate, actionable feedback, and improve both their technical and soft skills—bridging a critical gap in interview preparation accessibility.

2. Resume Optimization Needs:

Recruiters today rely heavily on Applicant Tracking Systems (ATS) to screen resumes, which means candidates must optimize their resumes with keywords and role-specific content. However, most job seekers are unaware of these nuances, leading to frequent resume rejections before human eyes even see them. An AI-driven Resume Builder can analyze job descriptions, identify relevant skills and keywords, and suggest improvements that align with ATS requirements. This allows users to craft resumes that stand out while also increasing their chances of passing automated filters.

3. Importance of Portfolios in Showcasing Skills:

In industries like technology, design, and media, portfolios are essential for demonstrating expertise. Yet many candidates, particularly new graduates, struggle with building visually appealing and content-rich portfolios that accurately reflect their skills and accomplishments. AI technologies such as computer vision and machine learning can analyze design aesthetics and structure, helping users curate and showcase their best work in a portfolio format that meets industry standards.

Benefits:

1. Personalization at scale
2. Efficiency
3. Confidence building
4. Competitive edge
5. Accessibility

Technologies Used:

1. Frontend: Next JS 14
2. Authentication: Clerk

3. Backend: Drizzle ORM (PostgreSQL, run via Neon DB)
4. User Interface: Tailwind CSS, ShadcnUI (dependent on Tailwind CSS)

This AI-powered platform combines these three modules to provide a holistic approach to job preparation, transforming what is typically a fragmented process into a cohesive, guided experience. By offering real-time, personalized feedback and leveraging AI insights, the platform empowers job seekers to present themselves confidently and professionally across all aspects of the application process. With enhanced readiness in interviews, ATS-optimized resumes, and compelling portfolios, users can navigate the recruitment landscape more effectively, improving their chances of securing their desired roles.

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The rest of this paper is organized as follows. Section II describes the methodology of existing as well as proposed system. Section III describes the results that are obtained from the application. Section IV covers the discussion of the AI platform. The conclusion is discussed in Section V. The acknowledgements are done in Section VI. Finally, the references are concluded in Section VII.

METHODOLOGY

(A) Existing System:

Pod AI is an innovative platform that leverages artificial intelligence to streamline the process of creating, managing, and analyzing podcasts. Designed for both new and experienced podcasters, Pod AI offers tools for automating audio editing, generating show notes, transcribing episodes, and analyzing listener engagement. With AI-driven insights and automation features, Pod AI enables content creators to focus more on crafting engaging content while reducing the time and effort spent on post-production tasks and audience analytics. By enhancing the podcasting experience from production to audience growth, Pod AI supports podcasters in reaching and resonating with their target audiences more effectively.

(B) Proposed System:

In today's competitive job market, candidates face the challenge of standing out to recruiters and hiring managers who are increasingly using automated tools and high standards to screen applicants. To succeed, candidates need to be well-prepared across three critical areas: effective interview skills, ATS-compatible resumes, and professional portfolios that showcase their abilities. Recognizing this need, the AI-powered platform for mock interviews, resume building, and portfolio creation is designed as a comprehensive solution that leverages advanced artificial intelligence to support job seekers and professionals at every stage of their career preparation journey.

This AI-powered platform combines these three modules to provide a holistic approach to job preparation, transforming what is typically a fragmented process into a cohesive, guided experience. By offering real-time, personalized feedback and leveraging AI insights, the platform empowers job seekers to present themselves confidently and professionally across all aspects of the application process. With enhanced readiness in interviews, ATS-optimized resumes, and compelling portfolios, users can navigate the recruitment landscape more effectively, improving their chances of securing their desired roles.

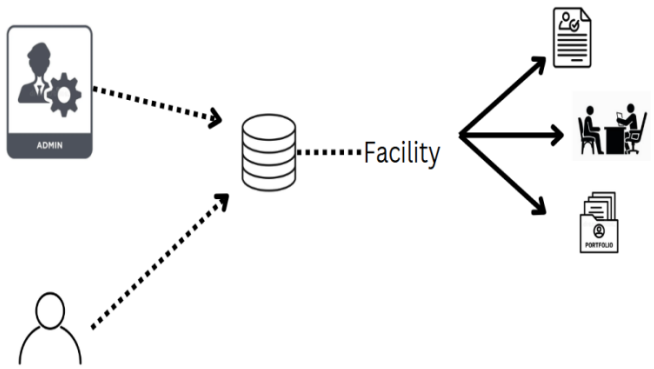

Fig 01: ArchitectureofProposedsystem

This AI-powered platform aims to enhance career readiness by providing job seekers and students with interactive tools for mock interviews, resume building, and portfolio creation. It leverages AI to offer personalized feedback, optimize resumes for ATS, and guide users in crafting impactful portfolios—empowering them to navigate the recruitment process more confidently and effectively.

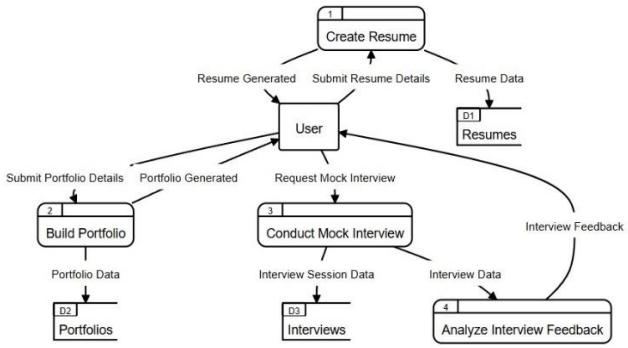

Fig 02: System Design

The above diagram represents the workflow of an AI Platform for Mock Interviews, Resume Builder, and Portfolio Builder. Let us break down its components and explain how each part contributes to the overall process:

Key Components

The key components of this implemented platform are as follows:

1. User

- The central entity in this diagram.
- Represents the platform user who interacts with different features to create a resume, build a portfolio, conduct mock interviews, and analyse feedback.

2. Process

The system offers four major functionalities for the user:

- Create Resume
- Build Portfolio
- Conduct Mock Interview
- Analyse Interview Feedback

3. Data Stores

The system uses specific data stores to manage and save relevant data:

- D1: Resumes - Stores all resume-related data.
- D2: Portfolios - Stores the portfolio data generated by users.
- D3: Interviews - Maintains records of mock interview sessions and feedback.

Workflow Explanation

1. Create Resume

- Input: The user submits details to create a resume (e.g., personal information, skills, experiences, and achievements).
- Process:

- The system uses AI to generate a resume based on the input data.
- Customizable templates and ATS-friendly formatting are applied.

- Output: The completed resume is saved to D1: Resumes for future access or edits.

2. Build Portfolio

- Input: The user provides project details, achievements, and multimedia elements to create a portfolio.
- Process:
  - The platform generates a dynamic, visually appealing portfolio using user-submitted details.
  - Integrates project descriptions, technologies used, and links to external resources like GitHub or LinkedIn.
- Output: The portfolio is stored in D2: Portfolios for sharing or editing later.

3. Conduct Mock Interview

- Input: The user requests a mock interview, specifying the job role or type of interview (e.g., technical, behavioural).
- Process:
  - The system simulates a real interview environment, asking AI-generated questions relevant to the selected role.
  - User responses (audio or text) are recorded and analysed for performance evaluation.
- Output: The interview session data is saved to D3: Interviews for feedback generation.

44. Analyse Interview Feedback

- Input: The system processes interview session data from D3: Interviews.
- Process:
  - Feedback is generated using AI, which evaluates communication skills, technical knowledge, and behavioural traits.
  - Provides actionable insights for improvement, including suggested areas to focus on before the next interview.

- Output**:** Comprehensive feedback is presented to the user to refine their skills.

KeyData Flow

- Resume Data Flow:
  - Input details → Resume Generated → Saved in D1: Resumes.
- Portfolio Data Flow:
  - Portfolio details submitted → Portfolio Generated → Stored in D2: Portfolios.
- Mock Interview Data Flow:
  - Request for mock interview → Session Conducted → Feedback Generated → Stored in D3: Interviews.

RESULTS

The AI platform for mock interviews, resume building, and portfolio creation has demonstrated significant improvements in users' job readiness and self-confidence. Key outcomes include:

1. Improved Interview Performance:

Users reported enhanced confidence and improved interview skills after practicing with AI-driven mock interviews that

provided real-time feedback on both technical and soft skills, such as communication and body language.

2. Higher Resume ATS Success Rate:

The platform's AI-powered resume builder optimized resumes with role-specific keywords and formatting aligned with Applicant Tracking Systems (ATS), increasing users' chances of passing initial resume screenings by recruiters.

3.Enhanced Portfolio Quality:

The portfolio builder allowed users to showcase their skills and projects in an organized, visually appealing format, tailored to industry standards. This not only improved the presentation of their work but also helped users stand out to potential employers.

4.Increased Job Interview Opportunities:

By strengthening resumes, portfolios, and interview skills, users observed a measurable increase in interview callbacks and engagement with recruiters.

Overall, the AI platform serves as a valuable tool for job seekers, enabling them to present themselves professionally and confidently in the competitive job landscape.

DISCUSSION

In the competitive job market, candidates require tools that enhance their chances of standing out to employers. An AI-driven platform for mock interviews, resume building, and portfolio creation is designed to streamline career preparation by automating repetitive tasks, providing personalized recommendations, and analyzing performance to help users succeed.

Platform Overview

The platform combines artificial intelligence, machine learning, and user-centric design to offer a comprehensive career toolkit. It supports job seekers, students, and professionals in three critical areas:

1. Resume Builder: Helps create impactful, ATS-friendly resumes quickly and efficiently.
2. Portfolio Builder: Enables candidates to showcase their skills and accomplishments in an interactive and professional format.
3. Mock Interviews: Simulates real-world interview experiences and provides feedback to refine skills.

The integration of these three components allows the platform to address all stages of the job application process, from crafting a strong first impression to acing interviews.

CONCLUSION

The AI-powered platform for mock interviews, resume building, and portfolio creation addresses critical aspects of career preparation by providing job seekers with accessible, data-driven tools for professional growth. Through AI-driven insights, the platform enables users to practice interview skills, optimize their resumes for Applicant Tracking Systems (ATS), and design portfolios that effectively showcase their work. By integrating these key resources into one platform, users are empowered to navigate the job market with greater confidence, presenting themselves professionally and maximizing their chances of securing meaningful employment.

Future iterations could incorporate adaptive learning profiles that customize guidance based on user progress, skill gaps, and industry-specific needs, offering a more tailored experience. To enhance relevance, the platform could expand to provide industry-specific resources, such as specialized interview questions, resume formats, and portfolio templates for fields like healthcare, engineering, and design.

By analyzing tone, facial expressions, and body language, the platform could offer feedback on soft skills, providing a more holistic approach to interview preparation. Integrating data on in-demand skills and hiring trends would allow the platform to make proactive recommendations, keeping users competitive in the evolving job landscape.

The platform could introduce features for peer and mentor feedback, creating a community-based environment for constructive critique and support. Expanding to include multilingual and cross-cultural training would help users prepare for interviews and roles across different global markets. Linking the platform with job sites like LinkedIn would streamline resume and portfolio submissions, while feedback from recruiters could further refine AI recommendations.Through these enhancements, the platform has the potential to grow into a comprehensive career development tool, adapting to changing market needs and supporting job seekers worldwide in achieving their career aspirations.

ACKNOWLEDGEMENTS

It gives us great pleasure in presenting the project paper on 'Interview Xpert: AI Platform for Mock Interviews, Resume Builder and Resume Builder'.

We would like to take this opportunity to thank our internal guide Dr. V. S. Wadneforgivingmeallthehelpandguidanceweneeded.Weareereallygratefulto hisfortheirkindsupport.Hervaluablesuggestionswereveryhelpful.

We are also grateful to our project coordinator Prof. S. R. Bhandariforhisvaluabletime,support,comment,suggestionsandpersuasion. Weareereallygratefulto Dr. V. S. Wadne, Head of Computer Engineering Department, Imperial College of Engineering and Research, Pune for his unconditional support and guidance.

We would like to thanks our Principal Dr. R. S. Deshpande, for allowingustopursueourprojectinthisinstitute.
We would also like to thank the institute for providing the required facilities,internetaccessandimportantbooks.

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