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Hunt The Career: An AI-Powered Job Portal for Students and Freshers

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ABSTRACT:

For students and recent graduates, the move from school to the workforce is still very difficult and is frequently accompanied by stress, uncertainty, and a lack of resources. In this article, we present Hunt The Career, an artificial intelligence-enhanced web-based platform designed to help students and entry-level job seekers with their career needs. Within a single, user-friendly interface, the platform combines vital services like government job updates, mentorship, AI-assisted resume building, job and internship listings, and mental wellness support.

The platform, which was created with the MERN (MongoDB, Express.js, React.js, and Node.js) stack and integrated with OpenAI APIs, offers users real-time, intelligent, and personalized functionality to help them manage and prepare for their career paths. A mental health chatbot, real-time mentorship connections, a clever resume builder, and a carefully curated database of public and private job openings are some of the main features. Agile methodology was used in the system's development, allowing for flexibility and ongoing enhancement. Hunt The Career seeks to improve students' readiness for the contemporary workforce, expedite the job search process, and lessen placement anxiety by attending to the practical as well as emotional needs of young job seekers. The platform's design, development process, and potential as a template for future student-focused career support systems are all covered in this paper.

Keywords: Career Portal, Internship Opportunities, AI Resume Builder, Student Mentorship, MERN Stack, Mental Wellness Chatbots, Job Matching.

1. Introduction

The transition from academia to the working world can be daunting for students and recent graduates. Many people experience this change without centralized resources, sufficient direction, or immediate assistance, which leaves them feeling unprepared for the workforce. This paper introduces Hunt The Career, an AI-powered online platform created especially to help students and entry-level professionals confidently build their careers in order to address these issues.

This platform provides wellness support, mentorship, resume building, and job discovery all in one location. Constructed using the MERN stack—MongoDB, Express, React, and Node.js—it guarantees dependable performance and a seamless user experience. It provides intelligent features like conversational guidance, career recommendations, and resume optimization by integrating OpenAI APIs.

- Hunt The Career's user-first design and emphasis on student-specific challenges distinguish it from conventional job portals. The platform provides: • An AI-powered resume builder with industry-relevant formatting and real-time suggestions;
- A mentorship module that pairs users with alumni and professionals for advice
- A chatbot for mental health providing support during the frequently trying job search; • A special section for government job updates and help with applications.

The system was developed using agile methodologies and is scalable and modular, enabling developers to modify features in response to user feedback and emerging technological trends. The platform seeks to bridge the gap between education and employment by bringing these tools and services together to reduce placement-related stress. This study examines the system's implementation and technical architecture as well as potential benefits for enhancing students' employability and general well-being.

2. Methodology

In order to create a scalable and maintainable platform that adapts to user needs, Hunt The Career was developed using an agile, modular software engineering process. The MERN stack—MongoDB, Express, React, and Node.js—is the foundation of the architecture and enables responsive, dynamic web applications.

2.1 System Architecture and Tech Stack

Frontend:-The frontend, which was created using React.js, provides a modular and responsive design that facilitates real-time interactions. To ensure maintainability and expedite development, reusable components were employed.

Backend:- The backend offers RESTful APIs for safe and effective client-server communication using Node.js and Express.js. Even with an expanding user base, it guarantees dependable data handling and quick processing.
Database:- AI-related content, mentorship profiles, job postings, and user data are all stored in MongoDB. For a platform like this, flexibility in managing a variety of data types is essential, and its schema-less design makes this possible.
Deployment and Scalability:-With optional support for containerization with Docker and Kubernetes, the platform is made to scale horizontally. This configuration improves reliability and expedites deployment.

2.2 AI Integration via OpenAI APIs

- The incorporation of AI features through OpenAI's GPT-based APIs is a key innovation in the system:
- AI Resume Builder: In order to improve alignment with industry standards and applicant tracking systems (ATS), this tool evaluates resumes and job descriptions and provides customized recommendations.
- Job Recommendation Engine: In order to improve alignment with industry standards and applicant tracking systems (ATS), this tool evaluates resumes and job descriptions and provides customized recommendations.
- Conversational AI for Career Support: A chatbot module gives users basic advice, mimics interview questions, and responds to questions about careers.
- A mentorship program was established to aid in bridging the gap between academia and business. Users can arrange sessions, get individualized guidance, and connect with verified professionals or alumni. In mentor interactions, a feedback system guarantees accountability and quality.

2.4 Additional Modules

- *Government Job Listings*: Postings from public service portals and government websites are routinely updated by a custom scraper module.
- *Mental Wellness Chatbot*: This bot uses basic cognitive-behavioral techniques to provide emotional support. In order to assist users in managing their stress while looking for a job, psychological first aid techniques served as its inspiration.

2.5 Development Workflow

With biweekly sprints and agile development, the project used Jira for tracking, Postman for testing APIs, and Git for version control. Because of its modular design, various parts (such as the mentorship, job feed, and resume builder) could be created and tested separately before being integrated.

2.6 Application Features

- Real-time government job updates;
- AI-powered resume optimization;
- an integrated chatbot for career and mental health support;
- administrative tools and notifications
- and user dashboards with role-based access control.

2.7 Middleware and Architecture

JWT tokens and secure REST APIs are used by the backend to authenticate users. Firebase is optionally used to support real-time functionality, and HTTPS is required for secure communication.

3. Results and Discussion

More than 100 people, including students, recent graduates, and HR professionals, participated in a beta phase to test the platform's efficacy. Their comments and user data revealed the platform's advantages and potential improvements.

3.1 Positive Outcomes

The beta test revealed a number of achievements:

- More Engagement and Visibility: Compared to traditional portals, users spent more time using platform tools and looking through job listings. They were able to locate relevant job listings faster thanks to the AI-powered recommendations.
- Better Resume Quality: AI-optimized resumes were found to better match job requirements by HR reviewers. Because of their improved content focus, stronger keywords, and cleaner formatting, these resumes had a higher chance of surviving ATS screening.
- User-Friendly Dashboards: The dashboard's user-friendly design and real-time data updates won accolades. For users who were new to applying for jobs, the ease of access to crucial features like resume feedback and alerts made the process less stressful.

3.2 Technical Design and Scalability

With Express.js handling server logic, React.js handling frontend interactions, and MongoDB storing data, the system employs a modular client-server architecture. Because AI tools like chat assistance and resume optimization are designed as stand-alone services, it is simpler to scale and manage them without interfering with other system components.
In accordance with best practices for scalable web development, this structure permits future updates and feature additions with the least amount of disturbance.

3.3 Challenges and Improvements

Despite the beta's overall success, a few problems were found:

- API Limits: There were sporadic delays and rate-limit errors when using the OpenAI APIs' free tier. In order to solve this, the team intends to add caching for frequently asked queries and move to a paid plan.
- Content Moderation: Open communication tools like mentorship and chat occasionally resulted in off-topic or irrelevant exchanges. The upcoming release will include reporting features and automated moderation tools.
- Mobile Usability: Despite being desktop-optimized, users emphasized the need for a mobile-friendly version. Future development sprints will give priority to a mobile-first design approach.

4. Conclusion

Hunt To assist students and new hires in managing their career paths, The Career provides a cohesive, intelligent platform. It fills a gap frequently missed by conventional job portals with its combination of AI tools, useful job search assistance, and emotional wellness resources. The system is well-positioned for continuous development and expansion because it was designed with scalability and modularity in mind.
Multilingual support, automated job sourcing, and improved machine learning for better candidate-job matching will be the main areas of future development. All things considered, this platform supports the larger objective of assisting young professionals as they enter the workforce in addition to increasing the effectiveness of job placement.

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