



Design And Development Of Career Guidance System

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Article Info

Article History:

Published: 11 Feb 2026

Publication Issue:

Volume 3, Issue 2
February-2026

Page Number:

184-187

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Abstract:

In today's competitive and rapidly changing educational environment, students often face difficulty in selecting suitable career paths due to lack of proper guidance, awareness, and personalized counselling. The Career Guidance System is designed to assist students in identifying appropriate career options based on their interests, academic performance, skills, and aptitude. This web-based system provides career recommendations, course information, and future opportunities through a user-friendly interface. The proposed system reduces dependency on manual counselling, minimizes confusion, and helps students make informed career decisions. It integrates structured questionnaires, career databases, and analytical techniques to provide accurate and reliable guidance. This paper discusses the system architecture, methodology, functional modules, results, and future enhancements of the Career Guidance System.

Keywords: Career Guidance System

1. INTRODUCTION

Career selection is one of the most important decisions in a student's life, directly affecting their future growth and job satisfaction. Traditional career guidance methods rely heavily on manual counselling, seminars, and personal opinions, which may not always be accurate or accessible to all students. Many students lack awareness about emerging career options, required skills, and suitable educational paths.

A web-based Career Guidance System provides a digital platform that helps students explore career opportunities based on their abilities and interests. The system offers personalized career suggestions, information about courses, entrance exams, and job prospects. It is beneficial for students, educational institutions, and counsellors by providing structured, consistent, and accessible career guidance.

2. METHODOLOGY

The development of the Career Guidance System begins with requirement analysis to understand student and administrator needs. Based on these requirements, system design and architecture are prepared. The application is developed using suitable web technologies and tested for accuracy and reliability. The Waterfall Model is followed to ensure systematic development, proper documentation, and clear phase-wise progress.

A. Functional Modules

• User Module

Handles student registration, login, profile management, academic details, interest assessment, and viewing career recommendations.

• Career Assessment Module

Conducts aptitude, interest, and skill-based tests to analyze student preferences and strengths.

• Career Recommendation Module

Generates suitable career options based on test results, academic background, and predefined rules or algorithms.

• Course & College Information Module

Provides details about courses, required qualifications, entrance exams, colleges, and training programs related to recommended careers.

• Admin Module

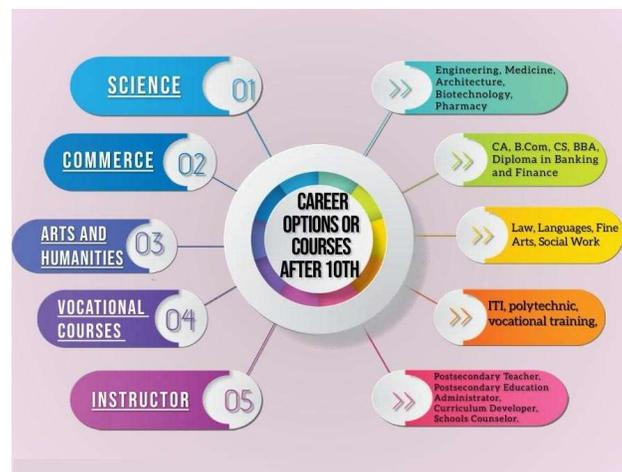
Allows administrators to manage career data, assessment questions, courses, colleges, and system updates.

• Report & Feedback Module

Generates career guidance reports for students and collects feedback to improve system accuracy

B. Testing

Testing is a critical phase to ensure the Career Guidance System functions correctly and efficiently. Unit testing, integration testing, and system testing are performed to verify accuracy of assessments, career recommendations, and data handling.



3. RESULT AND DISCUSSION

The Career Guidance System was tested for usability, accuracy, and performance across different user scenarios.

- **User Registration and Login:**

The system securely handled student authentication and profile management.

- **Assessment Accuracy:**

Interest and aptitude tests successfully evaluated student preferences and skills.

- **Career Recommendations:**

The system generated relevant and meaningful career suggestions based on test results and academic data.

- **Admin Dashboard:**

Administrators were able to update career options, courses, and assessment content efficiently.

- **User Experience:**

The interface was simple, responsive, and easy to understand for students.

4. CONCLUSION AND FUTURE WORK

This paper presented the design and development of a Career Guidance System aimed at assisting students in making informed career decisions. The system provides structured career assessments, personalized recommendations, and detailed career information through a web-based platform. It reduces confusion, saves time, and improves accessibility to career guidance.

Future enhancements may include:

- AI-based career prediction for higher accuracy
- Integration of real-time job market data
- Personalized learning path recommendations
- Multilingual support
- Mobile application development

ACKNOWLEDGMENT

The authors would like to express sincere gratitude to the project guide, faculty members, and the Department of Computer Engineering for their continuous support and guidance throughout the development of the Career Guidance System. Special thanks to peers for their valuable feedback and encouragement.

References

1. A. Sharma and R. Verma, "Web-based career guidance system for students," *International Journal of Computer Applications*, vol. 178, no. 25, pp. 15–20, 2021.
2. S. Patil and K. Deshmukh, "Career recommendation system using aptitude analysis," *International Journal of Advanced Research in Computer Engineering*, vol. 10, no. 3, pp. 45–52, 2022.
3. IEEE, "IEEE Citation Reference," IEEE, 2021.
4. N. Kumar, *Career Guidance and Counseling Systems*, Springer, 2020.