Future Focus Navigator Web Application For Student Career

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Abstract : The Web application which provides career guidance to the students. The application can be used by students and parents as it provides complete details of colleges like tuition and accommodation fees, eligibility criteria, campus placement opportunities, accommodation facilities, scholarship schemes, campus support services, rules and regulations etc. The application prepares the college list as per the entrance examination marks and the eligibility criteria of colleges and the courses chosen. The college list is filtered based on parameters like institution ranking, fee limits and location chosen.

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IndexTerms - HTML,CSS , Empower students, Career guidance resources, Career paths, Counselling.

INTRODUCTION

In the ever-evolving landscape of education and employment, students often find themselves at a crossroads, grappling with the multitude of career options available to them. Our application is designed with the sole purpose of empowering students to explore, evaluate, and pursue career pathways that align with their interests, skills, and aspirations. Recognizing the need for a reliable compass to navigate this terrain, we present our innovative student career guidance application. Students can embark on a journey of self-discovery through interactive assessments and quizzes that help them uncover their strengths, weaknesses, and areas of interest.

This Online Career Guidance System aim is to provide an overview of the Artificial Intelligence techniques that we used to predict the performance of the student.

This will help in improving the performance of the student and also motivate their interest so that they will be focused on their targeted career. This system is basically for the students from 10th to 12th standard who are confused about what career they want in future and what career they will choose so that it would be beneficial for their future..Also, application provides students with personalized guidance, based on their interests, skills, and goals.

It offers a range of features and tools, including assessments, career exploration resources, job search tools, and educational resources.. The main objective of this project is to help students make informed decisions about their career choices by providing them with guidance on various career options.

LITERATURE SURVEY

According to the study done by Areej Kamal et al. [9],it explores emotional intelligence and job seeker attitudes in career decision-making. The system employs adaptive learning algorithms to customize recommendations based on user progress and preferences.

The paper by Kasem Seng et al. [10], E-learning's role in career counseling is discussed, highlighting features such as self-assessment tools and job market information, Challenges include capturing subjective career decision making and ensuring accurate resources.

According to Mafufah Hastin et al. [6], the study showcases the positive impact of guidance and counseling services on students' career maturity. It helps students gain clarity, self-awareness, and decision-making skills related to their career paths.

Personalized Assessments: Utilizing advanced AI algorithms , the application will analyze students' profiles and preferences to generate personalized career assessments and recommendations. Existing models explains only about career counselling , awareness programs.

Virtual Career Advisors: Virtual assistants and chatbots will provide real-time support and guidance to students, answering queries, offering advice, and facilitating communication with career counselors as needed. Existing models describes only during specific period of time

Collaboration and Partnerships :AI Career Compass will collaborate with educational institutions, career centers, employers, and industry experts to enrich its content, expand its network of opportunities, and provide students with valuable insights and connections. Existing model cannot be performed with whole educational institutions.

RESEARCH METHODOLOGY

Proposed Sysrem has been developed as a web application for all users .It is a web app which is user friendly and it can be accesible by every one.

In our proposed system we let gather relevant data sources, including student profiles, academic records, career assessments.

The System analyzes user needs and requirements through surveys, interviews, and focus groups with students, educators.

Algorithm used in the system are Machine Learning,Artificial Neural Network(ANN) and Natural Language Processing (NLP) which is used in AI based student career application which is suitable for the application's development.

Here are the few steps which is used for the purpose of proposed methodology:

1.Get the source data that is required.

2. Sort out the data in the required format and remove irrelated data.

3. Derive a few conclusions using the ANN model.

4. provide input data to the input layer of the neural network.

5. Match yield to the desired result.

The Development of ai based student career guidance application involves few key steps:

1.Data Collection and Preparation:

Proposed system gathers demographic information, educational backgrounds, interests, and career aspirations from users through surveys or registration forms.

The system also contains   ethical data collection methods, ensuring informed consent and data anonymization to protect user privacy

2.Data Preprocessing:

Data preprocessing tasks,such as cleaning,filtering,and aggregating are performed using python.

3.Skill Identification:

Extract information on users' academic performance, extracurricular activities, and work experiences to identify relevant skills.

Develop proprietary algorithms to categorize and evaluate users' skills.

Utilize machine learning techniques to automate skill identification and analysis processes.

4.Content Analysis:

Analyze educational resources, such as articles, videos, and online courses, for relevance, credibility, and originality.

Implement natural language processing techniques to extract key concepts and topics from educational content.

5.Interest and Aptitude Assessment:

Proposed system analyses assessment results using statistical methods to identify relevant patterns and correlations.

The system ensures the given assessment questions and scoring algorithms are original and not copied from existing sources.

RESULTS AND DISCUSSION

It acknowledges the pivotal role played by assessments , career exploration , strengths , weaknesses and improving the performance of the test. This proposed system can provide customized career suggestions by analyzing students' interests, aptitudes, and academic backgrounds. By considering these factors, it can offer personalized guidance on suitable career paths aligned with each student's unique profile. On accordance with academic achievements and career aspirations, the application can recommend relevant educational pathways,whether it's recommending specific college majors, vocational training programs, or alternative learning routes, students receive guidance on the most suitable paths to achieve their goals. Through the system comprehensive analysis, the application can pinpoint areas where students may need to enhance their skills to excel in their chosen fields. This insight allows for targeted skill development initiatives tailored to individual needs.

Also, Proposed System works on AI-based applications which can recommend ongoing learning resources, such as online courses and professional development opportunities, to support students' career growth. By promoting continuous learning, these applications empower students to adapt to evolving job market demands and advance in their careers.

PROPOSED MODULES:

Admin:

It consists of certain sub modules like updating college details, adding new colleges, publishing the dates etc...

Announces the test and result dates of particular colleges.

Helpful to update or change the college details.

It is also helpful to add new colleges if there exist new colleges in a certain state.

College:

It consist application and checks the eligibility of the student.

Students can select the courses along with college.

In few colleges, they were conducting a Aptitude Test along with the cut-off marks.

It consists of fetching student details, conducting tests, checking eligibility, calculating marks, fee structure etc…

Student:

It consist of applying for colleges, selecting courses, attending tests etc..

Students can select the college in both UG and PG.

They can select their colleges in accordance with their cut-off marks and test results.

Management field is helpful to select a particular college, if the student is not eligible.

CONCLUSION

There is a lack of awareness and information about the various career options available for students after passing out of school in India. There is no culture of visiting a career counsellor in India.

Recent surveys say that 93 per cent of the students were aware of less than ten career options, mainly the basic ones like engineering, medicine, law, finance, IT, etc. In contrast, there are more than 600 career options available today. Therefore., the awareness levels of all the available career options for a student need to be increased.

The AI-based student career guidance application offers several benefits, including personalized career assessments, job matching, and recommendation generation, which empower students to make informed decisions about their future. Additionally, the application's integration with other libraries and frameworks, such as TensorFlow and Scikit-learn, enhances its capabilities and flexibility.

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