

# A Web-Based Smart Career Guidance and Skill Recommendation System for Students

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**Abstract:** *Deciding what to do after 12th grade can feel overwhelming for students. Hence, to help them choose their way on The basis of individual interest rather than examination result, we designed a very easy to use web based tool which is explaining streams (Science - PCB, PCM), commerce, arts streams and detailing about career options, skill sets, career-oriented entrance exam and their scope and salary.*

**Keywords:** *explaining streams*

## I. INTRODUCTION

Career choice is one of the most significant decisions that students make. Unfortunately, a lack of adequate knowledge and examination is the basis of choice; this leads students to choose unsuitable careers. Hence, the emerging trend of new technology makes the students need for the digital career guidance systems apparent; many papers have discussed the important aspects of developing and implementing digital career guidance systems. A Machine learning-based system could make accurate predictions from a large set of data. However, it requires enormous training data for training such a machine learning-based system, for predictive purposes. Web-based system offers education resources to the wider public; however, it doesn't have the ability of individual student support for education or career planning. However, interest analysis and visualisation, and chatbot-style service are missing.

## II. LITERATURE REVIEW

In current literature, a digital career guidance system should be used. Although machine-learning systems can give precise predictions, they need a large dataset. However, browser-based systems are accessible but not personalised. The previous literature provides no evidence on the incorporation of interest-based assessments or visualization and chatbots.

## III. RESEARCH GAP

There is no present solution for students in high school who will soon be graduating (seniors, grade 12) and there is no present solution that provides an individual student with career suggestions, which uses student interest to suggest paths and also uses visualisation analytics to help with chatbots for interaction.

## IV. PROPOSED SYSTEM

A web application can also be created in which user selects careers according to an interest questionnaire and careers can also be recommended based on interest questionnaire. The web application includes entire career path which will consist of required skills, exams and salary details for each career. A Web application is also possible with visualization and chat module for interaction.

## V. METHODOLOGY

The sequence of system functions is as follows: acquire a new user; select the stream; attempt an interest quiz; interpret the quiz answers with rules-based logic; decide a possible career based on the quiz answers; show the outcome through a chatbot.



### **VI. SYSTEM ARCHITECTURE**

The proposed system will adopt a client server (frontend and client part of the application) using the following languages: HTML, CSS and Javascript (for the frontend part) and PHP, MYSQL (for backend part). The flow of everything starting from processing the input to accessing the database to displaying the result.

### **VII. RESULTS AND ANALYSIS**

The resulting system offers job searchers recommendations tailored to their careers, it allows users to view career paths in charts, so that they know what kinds of careers they can work towards, it allows the system to interact with users via a chatbot, and finally it allows the system to operate in a user-friendly and efficient manner which it does better than any alternatives..

### **VIII. ADVANTAGES**

User friendly, cost effective system. Users will get personalized recommendations on the interests through dialogues with the Chatbot and visualizing the career paths

### **IX. CHALLENGES AND LIMITATIONS**

Challenges of building the recommendation logic and the chatbot functionality are the main obstacles. At the present, the logic is implemented by rule based logic and may be enhanced by AI/ML algorithms.

### **X. FUTURE SCOPE**

Further developments that will be undertaken in the future are the implementation of AI/ML techniques, the development of a mobile application and the real-time data integration and the building up of a more comprehensive careers database

### **XI. CONCLUSION**

Here is a new career advising system where students will be able to set their goals by having interest as a priority rather than marks.

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