

# Automated Career Counseling

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**Abstract:** In the education system, students find many counselors who will guide them for a particular career path but generally no one guides the student after entering into the particular career stream. This project is a system which is based on the analysis and suggestions. This is helpful for the students for analyzing their career and choosing the right future path. Results and suggestions or even the career preferences will be provided based on the input which is provided by the student. It will be so adaptive that an administrator can handle the database even without knowing the details of the database. The system will contain the whole area of the course in conjunction with the guidelines and necessary crucial information. This project aims to explore an objective and effective means of analyzing students. The system consists of the basic automated career counseling, guidelines, decision making and so on. The system can obtain the relevant information automatically from students then propose some solutions and recommendations. The analysis starts from when the student gives a thought about taking admission into engineering. Student evaluation plays an important part in university custom relationship management. The system is supposed to guide the candidate regarding his/her academics.

**Index Terms—** Automated Counselor, Ontology, Career Counseling

## I. INTRODUCTION

The students get confused to select a career path. Some time it happens that students are not feeling free to express his/her views in front of counselors, they are feeling shy. Even most of the students don't know about counseling. The poor family's student doesn't do counseling because of financial problem. So to recover these problems we are developing a product in which physical interaction is not done. We are developing a product based on automation. So our purpose is to provide different career options related to their interest in engineering. We will provide the guidelines to the student in whole engineering career. We will solve different problems which they are facing in engineering. We are providing guidelines to the student from earlier so they don't get panic at last. We are providing suggestions related to higher studies, competitive examinations, industry information, help to improve their extra circular activities.

## II. AUTOMATED COUNSELING (AC)

The process of assisting and guiding clients, especially by a system on a professional basis, to resolve especially

personal, social, or psychological problems and difficulties.

These are the objectives of automated counseling:

Automated Career Counseling

- Determine factors that are most appropriately determine one's most suitable career.
- Design a model that integrates Knowledge from necessary knowledge sources and recommends suitable college courses in a specific college/institution.
- Design and develop a prototype to demonstrate some of the functionalities of the above model.

## III. RELATED WORK

For some people, just the opportunity to talk to someone caring and supportive is enough to help them re-engage with their own coping resources. For others, a more detailed focus on what has gone wrong and how to put it right might be indicated.

Counseling works as a collaborative process, so it can't help if you aren't clear about what you want? .

Counseling helps to [1]:

- Make sense of what is happening with you.
- Identify the cause of particular problem.
- Explore thoughts and feelings.
- Enable a greater sense of self-awareness and insight.
- Explore destructive patterns of behavior.
- Help you look at the alternative options and make better choices.
- Help you decide on the best course of action.

## IV. COUNSELING

Counseling is a therapeutic relationship between you and a trained professional which helps you understand the underlying causes and solutions to your problems. It is not advice or a "quick fix". And so it can take time to develop a partnership with your counselor to help you find different ways of coping with and dealing with your emotional difficulties and relationships [2].

Here are some of the most common types of counselors:

### A. Marriage and Family Counseling

Marriage and family therapists help break dysfunctional cycles within the family unit. They help clients get to the root causes of situational and long-term issues, to help create lasting positive changes. With patience and care,

marriage and family therapists can make a huge difference in a family's health and well-being[8].

### B. Guidance and Career Counseling

Guidance counselors, or school counselors, help students achieve their goals by assisting them with coursework and providing them with the support they need to develop their skills and abilities. Guidance counselors also help students prepare for continuing education or careers[5].

### C. Rehabilitation Counseling

People with disabilities face unique challenges that often require creative alternative solutions. Whether a person has a physical, mental, developmental or emotional disability, rehabilitative counseling helps them achieve personal and professional goals, and lead their lives more freely[9].

### D. Mental Health Counseling

Professional counselors understand principles of human development, psychology, mental health and change theories, and they establish effective helping relationships with people from diverse cultures. Counselors are skilled in the assessment of people and situations, diagnosis and treatment of mental disorders, and in the application of cognitive, affective, behavioral and systemic strategies to facilitate change. As professional helpers, counselors are respectful and

responsive to clients and offer a safe place for people to share their experiences and to explore ways to cope. Counselors are skilled in implementing therapeutic interventions designed to help clients challenged by a range of circumstances including: trauma, depression, anxiety, stress, unanticipated life events, interpersonal discord, social injustice, work site disruption and career issues[11].

### E. Substance Abuse Counseling

Substance abuse counselors, also known as behavioral disorder counselors, help people with addictions and other behavioral issues cope with stress and life's challenges in a healthier way. Sometimes clients are also dealing with other mental health issues and a substance abuse counselor may partner with a psychiatrist as part of a treatment plan. Because substance abuse and eating disorders happen to people of all walks of life, a substance abuse counselor might spend one session working with a person who has court-ordered therapy and another session with a family intervening for a loved one. In any of these scenarios, substance abuse counselors have to be prepared for an immensely challenging, but rewarding, job[10].

## V. SYSTEM WORKING

We can see in the Figure 3.1 as the student comes he/she will first give the psychometric

test now the result will generate and suitable career option will be displayed. If he takes the admission then he will move to the next phases otherwise he can choose other career option. As he move toward the next phase whole syllabus the subject on which he /she have to focus will be suggested and result related guidelines will be given. As soon as he enters in second phase domain test will be conducted to select his domain. In third year the criteria of different companies will be given. In final year focus is on placements and Higher studies.

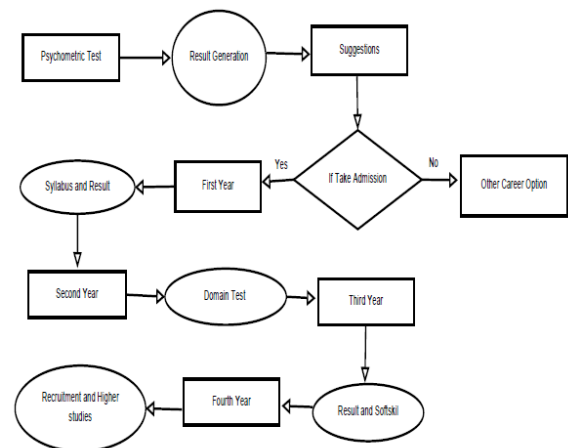


Figure 3.1: Architecture of System

## VI. WORKING IN WINDOWS

This system is totally based on decision making. This system working start with student registration process when student successfully register then we conduct "Psychometric test" of student on the basis of the test result If he or she pass the test then we suggest them engineering field according to their test result in which field they are interested. After taking admission we guide student for their academic career. If test result is fail then give them other career options. This system is based on following modules :

1. The Psychometric test
2. First year phase
3. Second year phase
4. Third year phase
5. Fourth year phase

1. *The Psychometric test:* This phase will give the result on the basis of test conducted. If student pass this phase then further module carried out otherwise suggest other fields than engineering.
2. *First year phase:* In this phase the result analysis will be done and the necessary suggestion will be given. Give details of academic syllabus make awareness of other activities to students.

3. *Second year phase* : In this phase the domain test will be conducted to analyze the interest student in particular domain according to that suggest them extra courses. Also provide academic syllabus.
4. *Third year phase* : In this phase aptitude session will be conducted to prepared student for companies and companies details will be given. Academic syllabus is provided.
5. *Fourth year phase* : In this phase guidelines provided for student who are willing for higher education and also for those who preferred job over higher studies. Also provide academic syllabus.

In every phase from first year to last year phase provide syllabus with note that which subject is important for preparing competitive exam for higher study. (e.g. for GATE exam which subject is required.) other necessary notification is also provided in every phase.

#### VII. FEATURES

- Expert counseling gives clear picture about technical field.
- Communication with system is user friendly.
- Result analysis is totally based on user input.
- Suggestions is equivalent to expert advice.

#### VIII. ADVANTAGES

- Helps in identifying Skills and interest: in first stage we are conducting a psychometric test. With help of this test we can indentify skills of the students and interest for their career path.
- Create Awareness: using this system we are creating awareness in the student to choose career path according to their interest not in any pressure.
- Helps to be Updated : in this system we are giving updates related to current technology to get updated . So the students are get update their knowledge.
- Helps in Overall development : in this system we are giving knowledge related to cogitative exams , company related information, knowledge of current technology etc. so it helps to improve the overall development.
- Helps to select right career path: after test result analysis based on this we are giving multiple options related career options. Then it is depend on student that select proper career from given options.

#### IX. PRODUCT PERSPECTIVE

- The system should identify the interest and knowledge of the students.

- It should be able to guide them according to the field they are selected.
- Available opportunities and technology are known to them.
- Updation of knowledge of the students are necessary.
- Company related information and what the expectation of company coming for Placement should be well inform.
- The extra circular activities and benefits of them to their career should be given.
- Those who want to go for higher studies the information should be given to them regarding compitative exams.

#### X. CONCLUSION

Hence the system is suppose to help the students in their education as well as in developing their career plan. Also in analyzing their self so that engineering/medical may become easier and students will be more self confident for the competitive world. So it helps those student who are confuse about their career who are not able to take decision for right career path. It help the student to improve the academics. It will make the student for companies. Simultaneously improve the curricular activity of the students. It will provide equal amount of opportunity to each and every student.

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