



ACROPOLIS
Enlightening Wisdom

Acropolis Institute of Technology & Research, Indore

Intelligent career Guidance System (GuideMe)

Submitted to:

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Team Members

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Abstract

Career choice has a pivotal role in college students' life planning. In today's world choosing the right career is the toughest decision. Today many students are confused about their future. They do possess some skills, but they are not able to identify their abilities and a proper domain. Different people suggest different career options but at last, the student must select their career. In this project, we have focused on this problem of the student using machine learning. With the help of machine learning, we will help the student to decide which is the best career option and domain for them using different machine learning techniques. The career is decided based on academic information filled by the student. This project will help the student to get directed towards a specific domain as per their skills.

Introduction

- ❖ Career guidance can be described as a process through which students become familiar with various career options, job opportunities and are prepared for those opportunities. Career counselling is the approach that will allow the student to understand his options, find his best skills and get acquainted with the world of work in order to make choices about employment, education and life.
- ❖ Competition today is heavily multiplying day by day. It is too hard in the present day to face the technical world. To compete and reach the goal of students, they need to be planned and organized from the initial and final stages of their education. So, it's important to perpetually assess their performance, establish their interests and assess how close they're to their goal and assess whether they are within the right path that directs towards their target. This helps them in improving themselves, motivating themselves to a better career path if their capabilities are not up to the mark to reach their goal and pre-evaluate themselves before going to the career peak point.

The Problem Statement

The current career guidance system lacks personalization and efficiency in matching individuals with suitable career paths based on their skills, interests, and values. As a result, many individuals struggle to make informed career decisions and face dissatisfaction in their chosen careers. A new career guidance system is needed to provide personalized recommendations and support in navigating the job market, thereby empowering individuals to make informed career choices that lead to long-term success and fulfilment.

Survey of Existing Systems

The study of existing systems for career guidance projects involves analysing and evaluating the various methods and resources currently available for individuals seeking career guidance. This includes evaluating traditional methods such as career counselling, job fairs, and career centres, as well as newer methods such as online career assessments, career networking platforms, and virtual career fairs.

- ❖ One traditional method that has been widely used for career guidance is career counseling. Career counsellors provide individuals with assessments, guidance, and support throughout the career exploration and decision-making process. They typically use a variety of tools such as interest assessments, personality tests, and skills assessments to help individuals identify their strengths and interests and match them to potential careers.

Survey of Existing Systems

- ❖ Online career assessments and career networking platforms have become increasingly popular in recent years. These platforms offer individuals the opportunity to take online career assessments, explore different careers, and connect with professionals in their field of interest. These online platforms are easily accessible to anyone with an internet connection, making them more convenient and accessible than traditional career guidance methods.
- ❖ Virtual career fairs are also becoming more popular in recent years. They allow individuals to interact with employers and recruiters from the comfort of their own home and explore job opportunities in a variety of industries.

Overall, the study of existing systems for career guidance projects aims to identify the strengths and weaknesses of the various methods available, and to identify areas where improvements can be made to provide individuals with more comprehensive and effective career guidance.

Objectives

- ❖ The proposed solution is a web-based application for engineering students early enough to:
 - Enhance understanding of their personality types.
 - Educate on the various options.
 - Enable them for their career planning, development, and guidance.
 - Make information available on career, education, etc. through sources.
 - Assist from choosing wrong options.
 - Be a partner in the overall journey.

Requirement Analysis

❖ **HARDWARE REQUIREMENTS**

- RAM : 4 GB
- HDD SPACE : 80 GB
- PROCESSOR : Intel Pentium IV

❖ **SOFTWARE REQUIREMENTS**

- OPERATING SYSTEM : Windows
- WEB SERVER : Tomcat
- DATABASE : MySQL5.0
- TECHNOLOGY : HTML, CSS, JavaScript, Bootstrap, PHP
- LANGUAGE : PYTHON

Solution Proposed

The proposed solution for this career guidance system for engineering students is to utilize the K-Nearest Neighbours (KNN) algorithm of machine learning to predict the three most suitable fields of interest for the student based on their provided data. The KNN algorithm is a supervised learning algorithm that is used for classification and regression.

The project will gather data from the students regarding their interests, skills, grades and other relevant information. This data will be used as inputs for the KNN algorithm to make predictions. The algorithm will then compare the student's data to a large database of individuals in different engineering fields to determine the three most similar individuals, and the fields in which they are working.

Once the predictions are made, the system will provide the student with detailed information about the recommended fields of interest and career prospects. The system will also provide resources and information on how to gain more experience and knowledge in these fields.

The use of the KNN algorithm in this project provides several advantages, including its ability to handle many inputs, its ease of implementation, and its ability to provide accurate predictions. Additionally, the KNN algorithm can be updated and improved over time as new data is collected and added to the database.

The Outcome Discussion

The outcome of this career guidance system for engineering students, utilizing the K-Nearest Neighbors (KNN) algorithm, has the potential to provide numerous benefits and improve the career exploration and decision-making process for students. Some of the potential outcomes of this project include:

- ❖ Improved career decision-making: By providing personalized and accurate recommendations for fields of interest, students will be better equipped to make informed decisions about their future careers. This will help them avoid pursuing careers that may not be a good fit for their interests and skills, leading to greater job satisfaction and career success.

The Outcome Discussion

- ❖ Better alignment of skills and interests: The KNN algorithm will analyze the student's data to determine the fields in which they are most likely to excel. This will help students understand which careers align with their interests and skills, leading to a more fulfilling and satisfying career.
- ❖ Increased career opportunities: By providing students with information about different engineering fields, including job descriptions, average salaries, and career prospects, the project will help students identify potential career opportunities that they may not have considered otherwise.

The Outcome Discussion

- ❖ Increased accessibility to career guidance: The use of the KNN algorithm and online platform for this project will make career guidance more accessible to students. This will help more students explore different career options and make informed decisions about their future careers, regardless of their location or accessibility to traditional career guidance resources.

Overall, the outcome of this career guidance system project has the potential to have a positive impact on the career exploration and decision-making process for engineering students. By providing personalized and accurate recommendations, students will be better equipped to make informed decisions about their future careers and achieve their career goals.

Conclusion and Limitation

In conclusion, the career guidance project will provide valuable insights and resources for individuals looking to explore and pursue their career aspirations. Through the research and analysis conducted, we have highlighted various career paths and industries, as well as the skills and qualifications needed to succeed in them. We have also discussed the importance of networking, internships, and continued education in the job search process. By utilizing the information provided in this project, individuals can make informed decisions about their career goals and take steps towards achieving them. We hope that this project has been helpful in providing guidance and inspiration for individuals as they navigate their career journey.

❖ LIMITATIONS

- There is always the possibility that you leave out some resources so it is possible that some users might not locate their requested places sometimes.

Q&A

THANKS