Identifying Patterns And Trends In Campus Placement Data Using Machine Learning

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Introduction

Overview

Project Description:

Campus recruitment is a strategy for sourcing, engaging and hiring young talent for

internship and entry-level positions.

Project Flow:

User interacts with the UI to enter the input.
Entered input is analyzed by the model which is integrated.
Once model analyzes the input the prediction is showcased on theUI

Specify The Business Problem

Campus recruitment is a strategy for sourcing, engaging and hiring young talent for internship and entry-level positions. College recruiting is typically a tactic for medium- to large-sized companies with high-volume recruiting needs, but can range from small efforts (like working with university career centers to source potential candidates) to large-scale operations (like visiting a wide array of colleges and attending recruiting events throughout the spring and fall semester).Campus recruitment often involves working with university career services centers and attending career fairs to meet in-person with college students and recent graduates.Our solution revolves around the placement season of a Business School in India. Where it has various factors on candidates getting hired such as work

experience,exam percentage etc., Finally it contains the status of recruitment and remuneration details.

We will be using algorithms such as KNN, SVM and ANN. We will train and test the data with these algorithms. From this the best model is selected and saved in .pkl format. We will be doing flask integration and IBM deployment

Problem Definition & Design Thinking

Business Requirements

The business requirements for a project aimed at "Identifying Patterns and Trends in Campus Placement Data using Machine Learning" would likely include the following:

Access to campus placement data: The project would require access to data on student performance, qualifications, and job placement outcomes. This data would need to be collected, cleaned, and prepared for analysis.

Machine learning expertise: The project would require individuals with expertise in machine learning, data science and statistical analysis to develop and implement the algorithms and models needed to analyze the data.

Literature Survey

There have been several studies that have used machine learning techniques to identify patterns and trends in campus placement data.

Social Or Business Impact

The business impact of a project that uses machine learning to identify patterns and trends in campus placement data could be significant. By analyzing data on factors such as student performance, qualifications, and job placement outcomes, the project could help organizations make more informed decisions about recruiting and hiring new graduates.

Data Collection & Preparation

ML depends heavily on data. It is the most crucial aspect that makes algorithm training possible. So this section allows you to download the required dataset.

Collect The Dataset

There are many popular open sources for collecting the data. Eg: kaggle.com, UCI repository, etc. In this project we have used .csv data. This data is downloaded from kaggle.com. Please refer to the link given below to download the dataset.

Read The Dataset Data Preparation

As we have understood how the data is, let's pre-process the collected data. The download data set is not suitable for training the machine

learning model as it might have so much randomness so we need to clean the dataset properly in order to fetch good results. This activity includes the following steps.

Handling Missing data
Handling Categorical data
Handling missing data

Handling Missing Values

Let's find the shape of our dataset first. To find the shape of our data, the df.shape method is used. To find the data type, df.info() function is used.

Our dataset format might be in .csv, excel files, .txt, .json, etc. We can read the dataset with the help of pandas. In pandas we have a function called read_csv() to read the dataset. As a parameter we have to give the directory of the csv file.

Exploratory Data Analysis

In this milestone, we will see the exploratory data analysis.

Visual Analysis

Visual analysis is the process of using visual representations, such as charts, plots, and graphs, to explore and understand data. It is a way to quickly identify patterns, trends, and outliers in the data, which can help to gain insights and make informed decisions.

Advantages and disadvantages

Campus placements **smoothen the overall process of getting that first job**. Without it, looking for a job as a fresher is like going into the wilderness unprepared. If you're a student from a reputable institution. You will benefit from the institution's reputation, which increases your marketability to employers.

Fresh candidates selected through campus placements require adequate training for work. This is an additional expense for the company. Also, students can't work with their dream company and will have to remain satisfied with the company that recruits them during campus selection.

Applications

Campus recruitment request letter can take its own form and there is no exact mandatory format to be followed. Companies can even call the college directly, but a written email would be preferred as it will be sent with company Id and that adds to the trust and gives a reference for any kind of latter reference

Conclusion

To conclude your report, **let us know how you found your placement and what skills and knowledge you think you have gained**.

Appendix

Source code:

Placements **give students an important direction to move forward in life**. The placement phase in college allows them to choose whether they want to get into the working industry right away or focus on a further degree.