Identifying Patterns and Trends in Campus Placement Data using Machine Learning

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**1.INTRODUCTION**

* 1. **Overview**

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.

* 1. Purpose

Bisiness problem:

##### MOST COMMON BUSINESS PROBLEMS

Every business experiences problems, regardless of your industry, business size or the phase of your business cycle. If your business is stagnant, you feel stuck, or you’re not experiencing the growth you desire, determine if you’re experiencing one of these common business problems.

##### FINDING YOUR PURPOSE

Does your company feel adrift? Do you change your mission statement constantly? If so, you’re experiencing a lack of purpose, one of the most common problems in business. After all, how can you expect to create [**raving fan employees**](https://www.tonyrobbins.com/career-business/treating-employees-like-raving-fans/) if you don’t wake up every morning excited for the day ahead? In addition, a lack of purpose can create [**employee retention problems**](https://www.tonyrobbins.com/business/effective-employee-retention/).

Being a strong leader is synonymous with [**having a sense of purpose**](https://www.tonyrobbins.com/stories/date-with-destiny/what-is-my-purpose/), and a genuine belief in personal success will help your business thrive. Your purpose gives you passion, drive, certainty, and the ability to overcome towering obstacles. A business is only as strong as the [**psychology of its leader**](https://www.tonyrobbins.com/stories/leadership-academy/the-psychology-of-a-leader/) – it’s up to you to do the work and bring purpose to your company.

##### DEVELOPING YOUR BRAND IDENTITY

[**Developing your brand identity**](https://www.tonyrobbins.com/career-business/create-brand-identity/) is vital to marketing and sales success, and struggling to establish an identity is one of the biggest business problems you’ll experience during the growth stage. Your identity epitomizes your company’s [**core values**](https://www.tonyrobbins.com/business/company-values/), mission and goals and profoundly affects company culture, impacting your ability to hire and retain the best employees.

Your brand identity drives the emotional connection with your consumer and ultimately [**creates customer loyalty**](https://www.tonyrobbins.com/career-business/how-to-create-customer-loyalty/). With a strong brand identity, you know who you are and your direction. Without it, you’ll be lost in the dark and struggle  to [**inspire raving fan customers**](https://www.tonyrobbins.com/career-business/create-raving-fan-customers/).

##### PROVIDING VALUE

Shrinking profits is a common business problem that can sometimes lead to bankruptcy. It’s easy to blame the market, but there’s always a reason for significant market shifts. If customers are flocking to competitors, then take note – you probably lack specific services or features they deem valuable.

To be successful in business, you must practice [**constant strategic innovation**](https://www.tonyrobbins.com/career-business/innovation-culture/). Determine your X-factor – what sets you apart from the competition? How do you bring more value to your customers? What [**makes your company different**](https://www.tonyrobbins.com/career-business/how-to-make-your-business-talkably-different/)? If you don’t know the answers to these questions, it’s time to sit down and think about them.

##### PLANNING AHEAD

Purpose and identity are crucial to your success, but also remember to [**make a massive action plan**](https://www.tonyrobbins.com/career-business/how-to-make-a-massive-action-plan-map/) (MAP), which allows you to stay agile in response to business challenges while keeping your eye on the prize. For example, most business owners aren’t prepared for a recession even though the economy is in recession 60% of the time. It’s easy to feel confident during good times, but it’s the hardships that matter.

A MAP outlines how your business will survive an income downturn, irrespective of whether it’s caused by a recession or the shifting valuation of your product or service. If your business isn’t built to weather the storms, it’ll be dead in the water. [**Get prepared for a recession**](https://www.tonyrobbins.com/starting-business-recession/) and other adverse economic possibilities before they happen.

* 1. **Business requirement :**

**Business requirements**, also known as stakeholder requirements specifications (StRS), describe the characteristics of a proposed system from the viewpoint of the system's end user like a [CONOPS](https://en.wikipedia.org/wiki/Concept_of_operations). Products, systems, software, and [processes](https://en.wikipedia.org/wiki/Business_process) are ways of *how* to deliver, satisfy, or meet business requirements. Consequently, business requirements are often discussed in the context of developing or procuring software or other systems.

Confusion arises for three main reasons.

1. A common practice is to refer to objectives, or expected benefits, as 'business requirements.' [[1]](https://en.wikipedia.org/wiki/Business_requirements#cite_note-1)
2. People commonly use the term 'requirements' to describe the features of the product, system, software expected to be created.
3. A widely held model claims that these two types of requirements differ only in their level of detail or abstraction — wherein 'business requirements' are high-level, frequently vague, and decompose into the detailed product, system, or software requirements.

Such confusion can be avoided by recognizing that business requirements are not objectives, but rather meet objectives (i.e., provide value) when satisfied. Business requirements *whats* do not decompose into product/system/software requirement *hows*. Rather, products and their requirements represent a response to business requirements — presumably, *how* to satisfy *what*. Business requirements exist within the business environment and must be discovered, whereas product requirements are human-defined (specified). Business requirements are not limited to high-level existence, but need to be driven down to detail. Regardless of their level of detail, however, business requirements are always business deliverable *whats* that provide value when satisfied; driving them down to detail never turns business requirements into product requirements.[[2]](https://en.wikipedia.org/wiki/Business_requirements#cite_note-2)

In system or software development projects, business requirements usually require authority from stakeholders. This typically leads to the creation or updating of a product, system, or software. The product/system/software requirements usually consist of both [functional requirements](https://en.wikipedia.org/wiki/Functional_requirements) and [non-functional requirements](https://en.wikipedia.org/wiki/Non-functional_requirements). Although typically defined in conjunction with the product/system/software functionality (features and usage), non-functional requirements often actually reflect a form of business requirements which are sometimes considered constraints. These could include necessary performance, security, or safety aspects that apply at a business level.

**2. PROBLEM DEFINTTION & DESIGN THINKING**

**2.1 Empathy Map**

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**2.2 Ideation & Brainstorming map**

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##### 3.RESULT

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4.ADVANTAGE AND DISADVANTAGE :

Advantage

**1. Automation**

Machine Learning is one of the **driving forces** behind automation, and it is cutting down time and human workload. Automation can now be seen everywhere, and the complex algorithm does the hard work for the user. Automation is more reliable, efficient, and quick. With the help of machine learning, now advanced computers are being designed. Now this advanced computer can handle several machine-learning models and complex algorithms. However, automation is spreading faster in the industry but, a lot of research and innovation are required in this field.

**2. Scope of Improvement**

Machine Learning is a field where things keep evolving. It gives many opportunities for improvement and can become the leading technology in the future. A lot of research and innovation is happening in this technology, which helps improve software and hardware.

**3. Enhanced Experience in Online Shopping and Quality Education**

Machine Learning is going to be used in the education sector extensively, and it will be going to enhance the quality of education and student experience. It has emerged in China; machine learning has improved student focus. In the e-commerce field, Machine Learning studies your search **feed and give suggestion** based on them. Depending upon search and browsing history, it pushes targeted advertisements and notifications to users.

**4. Wide Range of Applicability**

This technology has a very wide range of applications. Machine learning plays a role in almost every field, **like hospitality, ed-tech, medicine, science, banking, and business**. It creates more opportunities.

Disadvantage :

Nothing is perfect in the world. Machine Learning has some serious limitations, which are bigger than human errors.

**1. Data Acquisition**

The whole concept of machine learning is about identifying useful data. The outcome will be incorrect if a credible data source is not provided. The quality of the data is also significant. If the user or institution needs more quality data, wait for it. It will cause delays in providing the output. So, machine learning significantly depends on the data and its quality.

**2. Time and Resources**

The data that machines process remains huge in quantity and differs greatly. Machines require time so that their algorithm can adjust to the environment and learn it. Trials runs are held to check the accuracy and reliability of the machine. It requires massive and expensive resources and high-quality expertise to set up that quality of infrastructure. Trials runs are costly as they would cost in terms of time and expenses.

**3. Results Interpretations**

One of the biggest advantages of Machine learning is that interpreted data that we get from the cannot be hundred percent accurate. It will have some degree of inaccuracy. For a high degree of accuracy, algorithms should be developed so that they give reliable results.

**4. High Error Chances**

The error committed during the initial stages is huge, and if not corrected at that time, it creates havoc. Biasness and wrongness have to be dealt with separately; they are not interconnected. Machine learning depends on two factors, **i.e., data and algorithm**. All the errors are dependent on the two variables. Any incorrectness in any variables would have huge repercussions on the output.

**5.APPLICATION**

* Trend Analysis
* Assistance
* E-Commerce
* Computer vision
* Biometric devices

**6.CONCLUSION**

**Machine learning is one of the buzz words in the 21st century. It is highly in demand due to popular machine learning applications and advantages. It has revolutionized all the industries with its amazing capabilities. Machine learning has different fields and scopes some of which include pattern recognition, data mining, analysis, etc.**

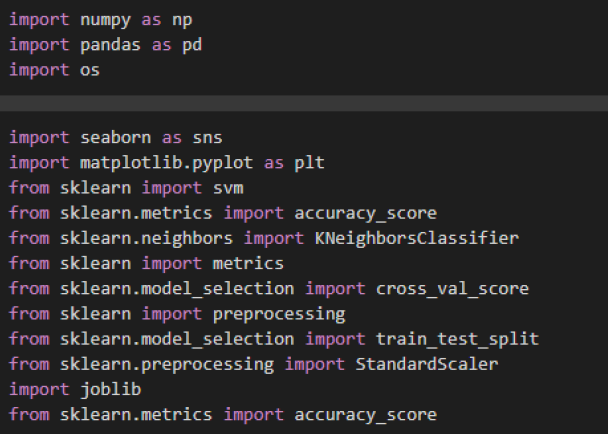
**Pattern recognition in machine learning is widely used in almost every industry today be it technical or non-technical. It has helped in the analysis and visualization of various trends. It has not only increased the efficienc and ease of analysis and prediction making but has also increased the job opportunities in the field. Top-notch companies such as Microsoft Pattern recognition in machine learning is widely used in almost every Industry today be it technical or non-technical. It has helped in the analysis and visualization of various trends. It has not only increased the efficiency and ease of analysis and prediction making but has also increased the job opportunities in the field. Top-notch companies such as Microsoft, Google, Amazon are looking for individuals skilled in the art-of pattern recognition and data analysis for making useful prodictions. Thus, wo can concludo by saying that pattern recognition is one of the most advancing fields in machine. Learning**

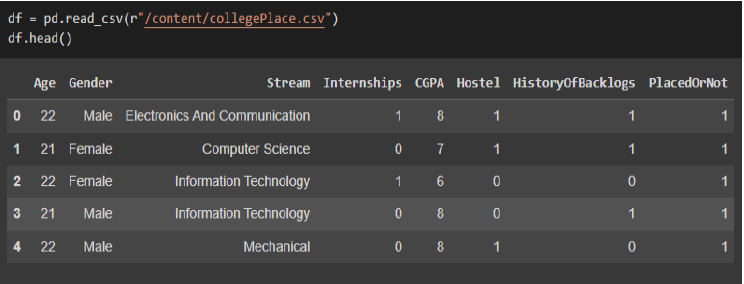
**7. FUTURE SCOPE**

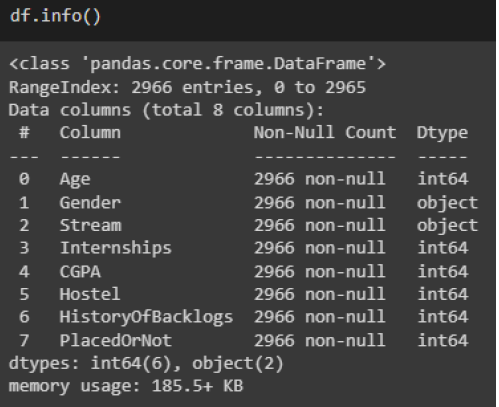
* **Data Mining-**It refers to the extraction of useful information from large amounts of data from heterogeneous sources. The meaningful data obtained from data mining techniques are used for prediction making and data analysis.
* **Recommender Systems**– Most of the websites dedicated to online shopping make use of recommender systems. These systems collect data related to each customer purchase and make suggestions using [machine learning algorithms](https://www.mygreatlearning.com/blog/most-used-machine-learning-algorithms-in-python/) by identifying the trends in the pattern of customer purchase.
* **Image processing**– Image process is basically of two types – Digital Image processing and Analog image processing. Digital image processing uses intelligent machine learning algorithms for enhancing the quality of the image obtained from distant sources such as satellites.
* **Bioinformatics** – It is a field of science that uses computation tools and software to make predictions relating to biological data. For example, suppose someone discovered a new protein in the lab but the sequence of the protein is not known. Using bioinformatics tools, the unknown protein is compared with a huge number of proteins stored in the database to predict a sequence based on similar patterns.
* **Analysis**– Pattern recognition is used for identifying important data trends. These trends can be used for future predictions. An analysis is required in almost every domain be it technical or non-technical. For example, the tweets made by a person on twitter helps in the sentiment analysis by identifying the patterns in the posts using natural language processing.

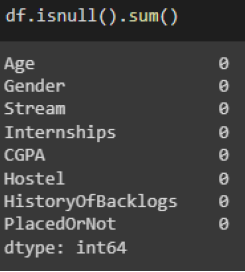
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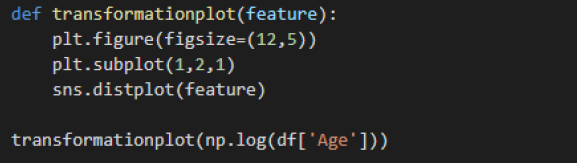
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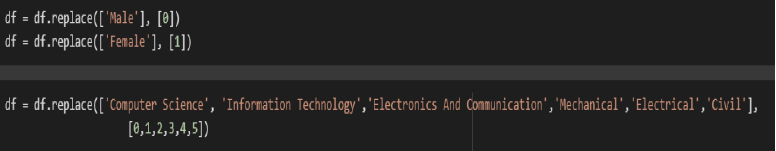
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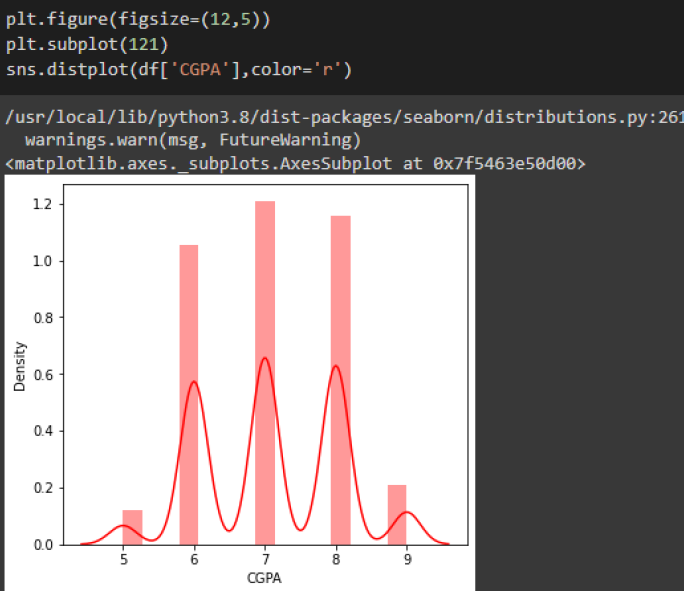
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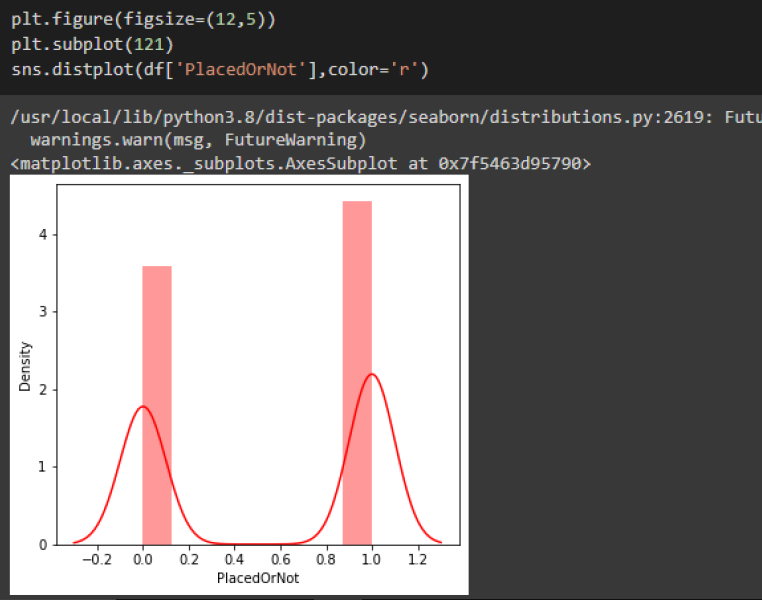
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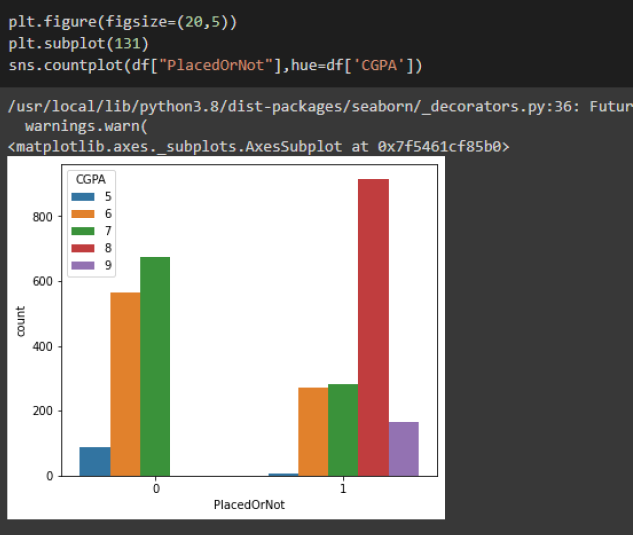
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