CONTENTS

1.INTRODUCTION

1.1 Overview

Identifying patterns and trends in campus placement refers to analyzing data related to the recruitment process of a particular institution to understand the hiring patterns of companies, job roles, compensation packages, etc. The analysis of such data can help identify trends that can provide insights into the job market and the demand for specific skills.

To identify patterns and trends in campus placement, one can follow the following steps:

Collect data: Gather data related to campus placements, including the names of companies, job roles, compensation packages, skills required, etc.

Analyze data: Analyze the data to identify patterns and trends. This can be done using statistical tools or data visualization techniques.

Identify the popular companies and roles: Identify the companies that are most popular among the students and the job roles that are in high demand.

Understand the skills required: Analyze the skills required by companies and job roles to identify the most in-demand skills. This can help students prepare better for the recruitment process.

Compare data: Compare the data over different years to identify any changes in hiring patterns or trends.

Use the insights: Use the insights gained from the analysis to provide guidance to students on the job market, prepare them for the recruitment process, and improve the institution's placement process.

1.2 Purpose

The purpose of early prediction for Identifying patterns and the trends in campus placement detection is to identify individuals who are at risk of developing CKD or who have early-stage CKD before they experience significant kidney damage. Early detection of CKD can help healthcare providers develop appropriate treatment plans and prevent the progression of the disease, thereby reducing the risk of kidney failure, cardiovascular disease, and other complications associated with CKD.

Early prediction of CKD can also help healthcare providers identify and manage underlying conditions that may contribute to the development or progression of CKD, such as high blood pressure, diabetes, and autoimmune disorders. By managing these conditions early, healthcare providers can help prevent further damage to the kidneys and improve patient outcomes.

Moreover, early prediction of CKD can lead to cost savings for healthcare systems by preventing the need for costly treatments such as dialysis and kidney transplantation. Early intervention and management of CKD can also help improve the quality of life for patients by reducing symptoms and complications associated with CKD.

In summary, the purpose of early prediction for CKD detection is to identify individuals at risk of developing CKD or who have early-stage CKD, allowing for early intervention and management, thereby reducing the risk of complications, improving patient outcomes, and reducing healthcare costs.

2. Problem Definition & Design Thinking

2.1 Empathy map

2.2 Ideation & Brainstroming map
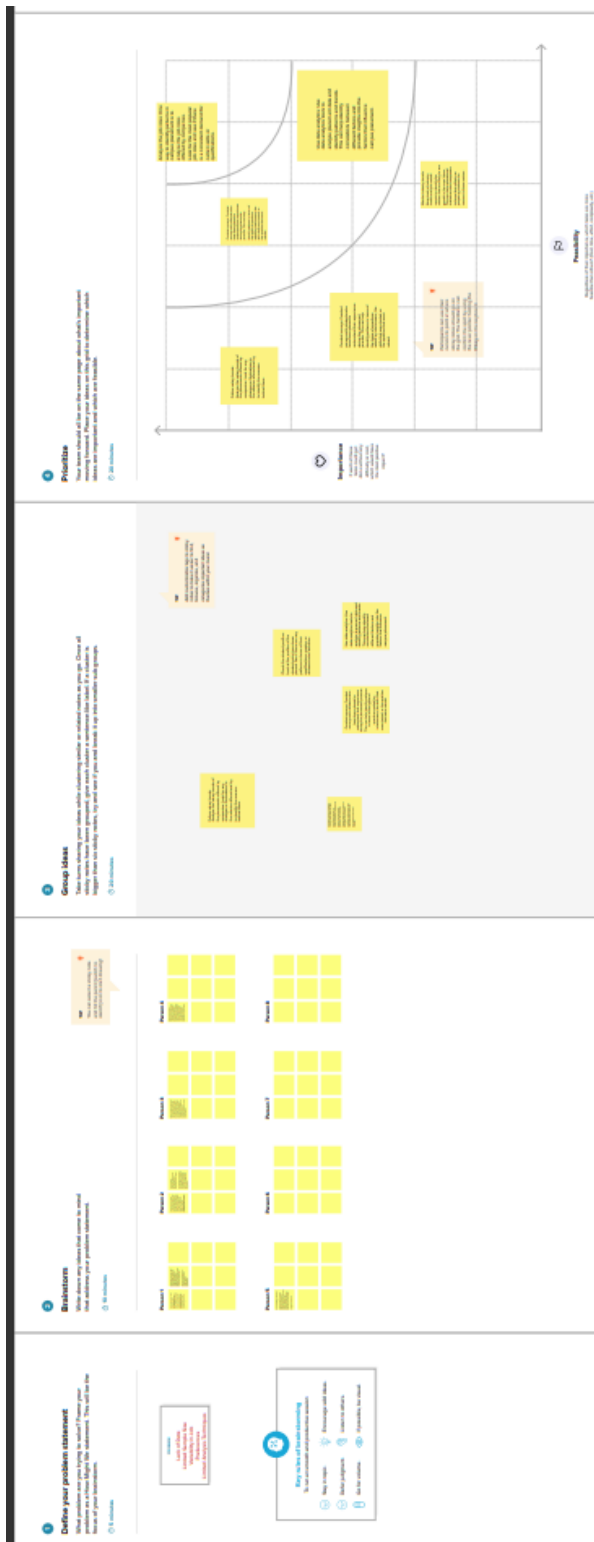
3. Result

PLACEMENT PREDICTION

The Prediction is : 1

0 represents Not-Placed
1 represents Placed

FILL THE DETAILS

22

0

2

1

8

1

Submit

Identifying Patterns and Trends in Campus Placement Data using Machine Learning

4 Advantages & Disadvantages

Advantages:

Early prediction of chronic kidney disease (CKD) can help identify individuals who are at high risk of developing kidney disease, enabling them to take steps to prevent or slow the progression of the disease.

Early detection can lead to timely treatment and management of the disease, reducing the risk of complications such as kidney failure and cardiovascular disease.

Early prediction of CKD can help healthcare providers to plan appropriate interventions and allocate resources effectively.

Early prediction can help reduce healthcare costs associated with CKD treatment by preventing or delaying the onset of the disease.

Disadvantages:

Early prediction models may not be accurate enough to accurately predict CKD in all individuals, leading to false positives and false negatives.

Early prediction may lead to unnecessary testing and procedures, resulting in increased healthcare costs and patient anxiety.

Early prediction may result in overdiagnosis, leading to treatment of individuals who may not have developed CKD without intervention.

Early prediction may not be feasible in all healthcare settings due to the availability of resources and technology required to implement predictive models.

5 Applications

There are several applications of early prediction of chronic kidney disease (CKD), including:

Preventative healthcare: Early prediction of CKD can identify individuals who are at high risk of developing the disease. By identifying these individuals early, healthcare providers can offer preventative measures such as lifestyle modifications, blood pressure control, and medication

management to slow or prevent the progression of the disease.

Patient management: Early prediction of CKD can help healthcare providers to monitor patients more closely and provide targeted interventions to prevent or delay the onset of complications associated with the disease.

Resource allocation: Early prediction of CKD can help healthcare providers to allocate resources more effectively by identifying patients who require more intensive monitoring and management.

Clinical research: Early prediction of CKD can provide valuable insights into the disease process, enabling researchers to develop new treatments and interventions to prevent or delay the progression of the disease.

Population health management: Early prediction of CKD can be used to identify populations at high risk of developing the disease, enabling public health officials to develop targeted interventions to prevent or delay the onset of CKD in these populations.

6. Conclusion

Early prediction of chronic kidney disease (CKD) is a valuable tool for identifying individuals who are at high risk of developing the disease. By identifying these individuals early, healthcare providers can offer

preventative measures and targeted interventions to prevent or slow the progression of the disease, leading to better health outcomes and reduced healthcare costs. However, there are also potential disadvantages to early prediction, such as false positives and false negatives, unnecessary testing and procedures, and overdiagnosis. Therefore, healthcare providers should carefully consider the benefits and limitations of early prediction models and use them judiciously to improve patient outcomes and population health.

7. Future Scope

The Future scope for early prediction of chronic kidney disease (CKD) is promising, as there are several emerging technologies and approaches that have the potential to improve the accuracy and accessibility of early prediction models. Some of the potential future developments in this field include:

Use of machine learning: Machine learning algorithms have shown promise in predicting CKD, and future research could explore ways to improve the accuracy of these models by incorporating additional data sources or developing more sophisticated algorithms.

Integration of genetic data: Advances in genomics have enabled the identification of genetic markers associated with CKD, and future research could explore ways to integrate this information into early prediction models.

Wearable devices: Wearable devices such as smartwatches and fitness trackers could be used to monitor key health metrics such as blood pressure and heart rate, providing valuable data for early prediction models.

Telemedicine: Telemedicine could be used to expand access to early prediction models in underserved communities, enabling healthcare providers to identify individuals at high risk of developing CKD and provide targeted interventions to prevent or slow the progression of the disease.

Personalized medicine: Personalized medicine approaches could be used to tailor interventions based on an individual's risk profile and disease progression, improving the effectiveness of early prediction models and reducing the risk of adverse outcomes.

Overall, the future of early prediction of CKD is likely to involve a combination of technological advancements and personalized approaches, enabling healthcare providers to identify and manage CKD more effectively and improve patient outcomes

8. Appendix
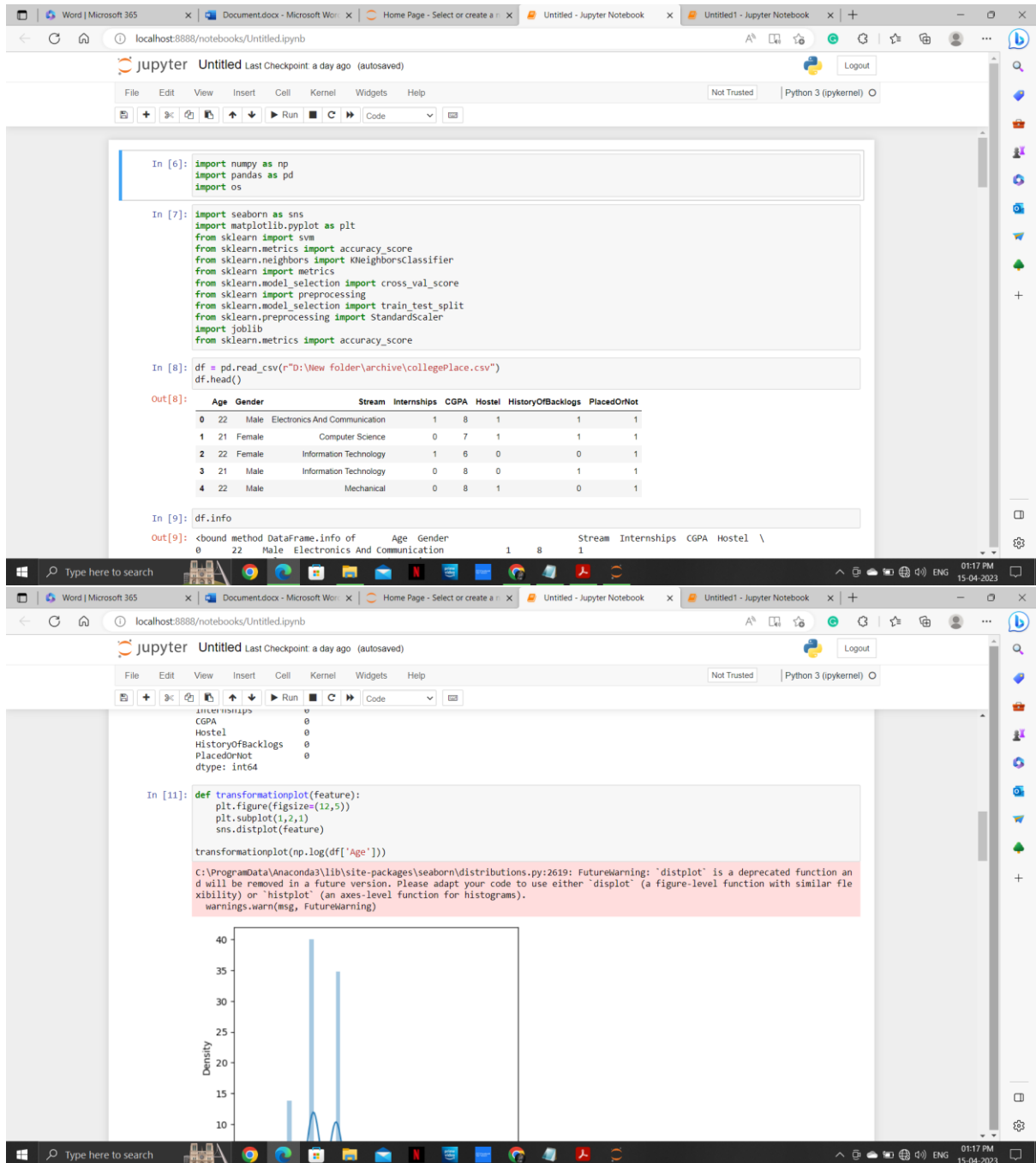
Word | Microsoft 365 × | Document.docx - Microsoft Wor × | Home Page - Select or create a n × | Untitled - Jupyter Notebook × | Untitled1 - Jupyter Notebook × | +

localhost:8888/notebooks/Untitled.ipynb

jupyter **Untitled** Last Checkpoint: a day ago (autosaved)

Logout

File | Edit | View | Insert | Cell | Kernel | Widgets | Help

Not Trusted | Python 3 (ipykernel) O

Run | Code

```
In [9]: df.info
```

```
Out[9]: <bound method DataFrame.info of        Age  Gender                      Stream  Internships  CGPA  Hostel \
        0      22    Male  Electronics And Communication      1       8     1
        1      21  Female               Computer Science      0       7     1
        2      22  Female         Information Technology      1       6     0
        3      21    Male         Information Technology      0       8     0
        4      22    Male                     Mechanical      0       8     1
        ...   ...     ...                            ...    ...     ...   ...
        2961   23    Male         Information Technology      0       7     0
        2962   23    Male                     Mechanical      1       7     1
        2963   22    Male         Information Technology      1       7     0
        2964   22    Male               Computer Science      1       7     0
        2965   23    Male                          Civil      0       8     0

              HistoryOfBacklogs  PlacedOrNot
        0                     1            1
        1                     1            1
        2                     0            1
        3                     1            1
        4                     0            1
        ...                 ...          ...
        2961                  0            0
        2962                  0            0
        2963                  0            0
        2964                  0            0
        2965                  0            1

        [2966 rows x 8 columns]>
```

```
In [10]: df.isnull().sum()
```

```
Out[10]: Age            0
         Gender         0
         Stream         0
         Internships    0
```

Jupyter Untitled Last Checkpoint: a day ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help

```python
In [12]: df = df.replace(['Male'],[0])
         df = df.replace(['Female'],[1])
```

```python
In [13]: df = df.replace(['Computer Science','Information Technology','Electronics And Communication','Mechanical','civil'],[0,1,2,3,4])
```

```python
In [14]: df = df.drop(['Hostel'], axis=1)
```

```python
In [15]: df
```

Out[15]:

	Age	Gender	Stream	Internships	CGPA	HistoryOfBacklogs	PlacedOrNot
0	22	0	2	1	8	1	1
1	21	1	0	0	7	1	1
2	22	1	1	1	6	0	1
3	21	0	1	0	8	1	1
4	22	0	3	0	8	0	1
...	...	...	...	...	...	...	...
2961	23	0	1	0	7	0	0
2962	23	0	3	1	7	0	0
2963	22	0	1	1	7	0	0
2964	22	0	0	1	7	0	0
2965	23	0	Civil	0	8	0	1

2966 rows × 7 columns

```python
In [17]: plt.figure(figsize=(12,5))
```

Jupyter Untitled Last Checkpoint: a day ago (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help   Not Trusted | Python 3 (ipykernel) ○

```
sns.countplot(df['Stream'])
plt.show()
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword a
rg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit ke
yword will result in an error or misinterpretation.
  warnings.warn(
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword a
rg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit ke
yword will result in an error or misinterpretation.
  warnings.warn(
```



```
In [30]: plt.figure(figsize=(20,5))
plt.subplot(131)
sns.countplot(df["PlacedOrNot"],hue=df['CGPA'])
```

```
sns.distplot(df['PlacedOrNot'],color='r')
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: `distplot` is a deprecated function
and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar
flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[17]: <AxesSubplot:xlabel='PlacedOrNot', ylabel='Density'>


```
In [29]: plt.figure(figsize=(18,4))
plt.subplot(1,4,1)
sns.countplot(df['Gender'])
plt.subplot(1,4,2)
sns.countplot(df['Stream'])
plt.show()
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword a
rg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit ke
yword will result in an error or misinterpretation.
  warnings.warn(
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword a
rg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit ke
yword will result in an error or misinterpretation.
  warnings.warn(
```

jupyter Untitled Last Checkpoint: a day ago (autosaved)

Logout

File   Edit   View   Insert   Cell   Kernel   Widgets   Help

Not Trusted   Python 3 (ipykernel) O

Code

C:\ProgramData\Anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning: Pass the following variable as a keyword a
rg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit ke
yword will result in an error or misinterpretation.
  warnings.warn(

Out[30]: <AxesSubplot:xlabel='PlacedOrNot', ylabel='count'>

In [25]: sns.swarmplot(df['PlacedOrNot'],df['CGPA'],hue=df['Stream'])

C:\ProgramData\Anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning: Pass the following variables as keyword ar

jupyter Untitled Last Checkpoint: a day ago (autosaved)

Logout

File   Edit   View   Insert   Cell   Kernel   Widgets   Help

Not Trusted   Python 3 (ipykernel) O

Code

In [25]: sns.swarmplot(df['PlacedOrNot'],df['CGPA'],hue=df['Stream'])

C:\ProgramData\Anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning: Pass the following variables as keyword ar
gs: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit
keyword will result in an error or misinterpretation.
  warnings.warn(
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 93.9% of the points cannot be placed; you
may want to decrease the size of the markers or use stripplot.
  warnings.warn(msg, UserWarning)
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 93.0% of the points cannot be placed; you
may want to decrease the size of the markers or use stripplot.
  warnings.warn(msg, UserWarning)

Out[25]: <AxesSubplot:xlabel='PlacedOrNot', ylabel='CGPA'>