NOTES BY
PROF. VISHAL CHUGH

Marketing Analytics Concepts

1. What is Data Security ?

Data security is the practice of protecting digital information from unauthorized access, corruption or loss throughout its entire lifecycle

2. Process to secure and access the data

1. Encryption
2. Decryption

3. What is Encryption ?

Encryption is the process of converting information into a coded format, making it unreadable to anyone without the proper key

NOTES BY
PROF. VISHAL CHUGH

4. What is Decryption ?

It is the process of converting encrypted data back into its original, readable form

5. Encryption Types

1. Symmetric
2. Asymmetric

6. What is Symmetric Encryption ?

A single secret key is used to encrypt and decrypt the data

7. What is Asymmetric Encryption ?

It uses a pair of keys i.e. a public key that can be shared with anyone for encryption and a private key that must be kept secret for decryption

8. Which encryption technique is mainly prefered and why ?

Symmetric encryption is mainly prefered because it is generally faster and more efficient than asymmetric encryption, making it suitable for encrypting large amounts of data

9. What is cryptography ?

The process of encrypting and decrypting data is called cryptography

10. How to import Fernet from Cryptography in python ?

from cryptography.fernet import Fernet

11. Whenever we have to calculate the average of any column in the dataset we use which inbuilt function in python ?

We use mean( ) inbuilt function to calculate the average

12. What are the 4 main types of segmentation ?

4 main types of segmentation are Behavioral, Demographic, Geographic and Psychographic

13. Which module is used for encryption and decryption (imported from cryptography) ?

Fernet is the module that is used for encryption and decryption

14. What is Customer Persona ?

A customer persona is a fictional representation of your ideal customer, based on real data and research. It helps businesses better understand their target audience's needs, behaviors, motivations and challenges.

15. Steps to develop customer persona ?

1. Conduct Research
2. Identify key demographics
3. Understand behavioral Traits
4. Explore Psychographics
5. Map the buying journey

16. Which is the first step in python ?

The first step in python is always to import necessary libraries

17. How is pandas library used to load dataset in python ?

```
variable_name = pd.read_csv('file_name.csv')
variable_name = pd.read_excel('file_name.xlsx')
variable_name = pd.read_json('file_name.json')
```

18. How to see the first 5 rows in the given dataset ?

We use variable_name.head( ) to see the first 5 rows in the given dataset

19. How to see the last 5 rows in the given dataset ?

We use variable_name.tail( ) to see the last 5 rows in the given dataset

20. How to see the datatypes in python ?

variable_name.dtypes

21. How to see the number of rows and columns in the dataset ?

variable_name.shape

NOTES BY
PROF. VISHAL CHUGH

22. How to see whether data is having duplicate records or not ?

variable_name.duplicated( ).sum( )

23. How to see whether data is having any missing values or not ?

variable_name.isna( ).sum( )

24. How to create copy of the original dataset ?

variable_name_copy = variable_name.copy(deep = True)

25. How to create a box-plot for column which are have missing values ?

sns.boxplot(data = variable_name['column_name']

26. How to calculate the mean to *fill the missing* values *in python where there are no outliers ?*

variable_name['column_name'].fillna(data_frame['column_name'].mean( ) , inplace = True)

27. How to calculate the median to *fill the missing* values *in python where there are outliers ?*

variable_name['column_name'].fillna(data_frame['column_name'].median( ) , inplace = True)

28. How to calculate the mode to fill the missing values in python where variables are categorical ?

variable_name['column_name'].fillna(data_frame['column_name'].mode( ) , inplace = True)

29. Why do we write inplace = True ?

We write this condition because it instructs the method to modify the original DataFrame