

11

JULY

2024

Thursday

WK 28th - 193.173

two thousand twenty four

July						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				
M	T	W	T	F	S	S

09.00

## SECTION - A

## CLASSIFICATION Problem :

10.00

\* involves predicting categories of a given set of input data

11.00

12.00

\* output is a discrete value that corresponds to class labels

13.00

## KEY DIFFERENCE

14.00

## CLASSIFICATION

## REGRESSION

15.00

1. Categorical output

1. Numerical output

16.00

2. aim to assign input data

2. aim to predict based on input features

17.00

18.00

## ALGORITHMS :

19.00

1. Decision Tree

2. KNN

3. SVM

5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
M	T	W	T	F	S	S

09.00

## b.) Odds Ratio

10.00

\* represents how odds of the dependent event changes with one-unit increase in the predictor variable.

11.00

12.00

\* it relates to the coefficient of the predictor variable

13.00

14.00

odds ratio  $> 1$  = increased odds  
odds ratio  $< 1$  = decreased odds

15.00

## c.) Principal Component Analysis

16.00

- \* reduce number of variables
- \* by transforming original variables into smaller set
- \* of uncorrelated variables

17.00

18.00

19.00

## FACTOR ANALYSIS

- \* identify relationships in the observed variables
- \* by dividing them into factors

## BUSINESS APPLICATION :

- + Data Compression
- + Feature Extraction
- + Market Research

Happiness is not something we find-it's something we create.

13

JULY

2024

Saturday

WK 28th - 195-171

two thousand twenty four

July							2024
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
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M	T	W	T	F	S	S	

09.00

## SECTION B

## a) TIME SERIES VS REGRESSION

data points based on the order of time  
whereas in regression there is no specific order

Order splitting in time series should respect the sequence  
whereas in regression, there is no such rule.

## b. STATIONARITY IN TIME SERIES

if mean, variance and autocorrelation are constant over time

if null hypothesis should be rejected to consider series stationary

## METHODS :

- \* visual inspection
- \* statistical test

## TESTS :

ADF Test

August							2024	
			1	2	3	4		
5	6	7	8	9	10	11		
12	13	14	15	16	17	18		
19	20	21	22	23	24	25		
26	27	28	29	30	31			
M	T	W	T	F	S	S		

two thousand twenty four

JULY  
2024

Monday

15

WK 29th - 197-169

09.00 c.) FORMATTING DATE OBJECTS

10.00 Date is formatted in  
yyyy - mm - dd hh : mm : ss

12.00 how to change

13.00 date series = pd.to\_datetime

14.00 EVALUATION METRICS :

x MAE

u MSE

# RMSE

L MAPE