

Final Suggestion

- Answer 4 out of 5 \rightarrow C2 [20 mark] difference, Explain
(10min) \rightarrow object detection [5]
- Answer 3 out of 4 \rightarrow C3 [30 mark] Application, Simulation
[lengthy]
- Answer 4 out of 5 \rightarrow C4 [20 mark] Analysis
(15min each)

Suggestion: (C3)

Q Factor Analysis: PCA, ... (10 mark) অনেক sure.
 Centroid, factor loading, Eigen value ...
 comparative study.

Regression Analysis:

- Linear/Univariate Regression
- Multivariate Regression.

Statistical Analysis: (slide-3)

Quiz + slide \rightarrow similar type Question আসিবে [5 mark]
 (Give must)
 $90, 95, 99 \rightarrow$ 2 value কুম্ভ কোর্টের value ফিরে না; t value?

chart দিয়ে আছে।

(blame): positive

Quiz(4) → [5]

- ↳ CNN model
- parameters
- Sir solution পিছে
- Decision tree

Clustering

- k-mean
- Fuzzy c mean
- Fuzzy C mean
- COBWEB
 - ↳ ক্ষেত্রে simulation কর্মসূচি আছে যদি

10 (C₃)

Object detection: slide-11

5 marks (C₂) * Foster CNN
* YOLO

Slide-2 → 5marks (all short ques আছে)

low-high filter, life cycle^{important} এই step, ETL-TLT, Sandbox,
transformation, multicollinearity problem & solve,
regularization

Time Series Analysis: [5 mark]

Arima model.

Classification: (5 mark)

↳ F₁ score, confusion matrix, ROC, AUC, precision, micro-
macro, Avg precision

* Data visualization কথের বাই

বিজ্ঞ আছে তা, minor বিজ্ঞ
ছাত্র প্রেস তাঁর পাসে।

* slide-1 বাই

* Polynomial regression - বাই

slide - 2

- ④ Data Preprocessing → image aula (slide 1) & slide 2
- ④ class noise Attribute noise table ~~Attribute~~ explain
+ PPT → [Noise].pdf
- ④ Butterworth 10 slide ..
- ④ 633 slide
- ④ SMOKE algo
- ④ 53 slide . (kendall वाद)
54
- ④ 57 → (multicollinearity रूप) ~~(multicollinearity रूप)~~ Feature selection
temp bronc
- ④ दुर्लभ dataset व comparison करते हुए तथा scaling
करने normalization करते हुए आदि ,
(59) what is the difference (छोटा topic आजहा प्रश्न)

Slide - 3

→ 10 (Slide 3 solution + Quiz Ques)

Slide - 4

→ 2 → factor Analysis → PCA correlation - 6 .

→ Bartlett's test वाद .

→ 16 must उठाए step जैसे simulation , Comparative study
whole step .

→ PCA

वाद वाद .

Slide 5 (5mark)

→ Quiz Math (circ solution Rule)

Polynomial → बहुपद ।



Slide-6

→ Association Rule (support, confidence)

5mark .

(probabilistic) able 32

slide-7 (no simulation)

→ 5, 6, 7 → short quest (difference, explanation)

→ Idea about matrix factorization.

→ Idea about matrix factorization.

(and some formulas for it)

• Transformation करके work करते हैं

• The last slide

AB

in Ans

Data Analytic

Date: 23 September
24

Lecture-8

Fuzzy \rightarrow very important
C-mean

(1, 1)
 $x, y \rightarrow$ feature आयु निच्छे value उच्चता probability.

(equation हातना मात्र बायक्षणे इत्ये simulation वै जाता)

must बास्तव practice बहुत हो।

↓ Formation.

* intra class similarity द्वारा विभेद equation आवश्यक है
देखा heuristic measurement है।

प्रथान क्षेत्र सुधारित करने आवश्यक।

Quiz-3 (Internal validation indexes)

DUN index Davis Index \rightarrow must math.

V (1.5, 1.16)

Dun if 3 cluster

$$A \{2, 2\}$$

$$d(c_1, c_2)$$

$$C \{1, 1\}$$

$$d(c_1, c_3)$$

$$E \{1.5, 0.5\}$$

$$d(c_2, c_3)$$

time-series

AR → equation কিভাবে আজি রয়েছে। নিজের data
মিছু y_t টো create কৈবল্য।

non zero centroid \rightarrow ^{zero} centroid \rightarrow স্থানে ইতে ধূঁড় আস

zero centroid রয়েছে \rightarrow δ টো বাবে μ_{mean}

$$\text{MA} \rightarrow y_t = \varepsilon_t + \dots$$

value কেন্দ্র রয়েছে AR -এ model's d.f.
যদি already zero centroid.

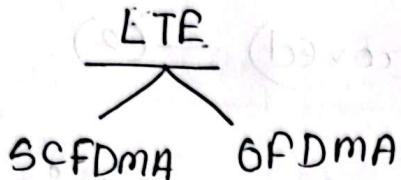
(ARMA)

AIC → performance measure রয়েছে।

SS → Error → Summation.

Telecom

Assignment last date - 3 oct 2024.



Block diagram

Why do we use SCFDMA in Uplink and OFDMA in downlink.

Final

Lecture-1 to Lecture-11

→ 2D model আছে তারের
গুরুত্ব সোজায়।

mathও নামলা পাবো।

Lecture-3 রাদ

12 "

13 "

Q-1 → theoretical

Q-2 → Prove that, show that

Q-3 → math type.

Slide-1

Data Rate & Bandwidth (Prove & description type).

Slide-2

-Inter-LATA service → switch কিভাবে কাজ করবে।

- * यहाँ LATA किए हुए connection वाले communication क्या हैं ?
- * Signalling → features, वाले हुए नेटवर्क
- * MODEMs → Problem Analysis → ADSL → (Prove / description type)
 - यहाँ asymmetric
 - यहाँ bandwidth 1.1 MHz, dial up 4 kHz
 - Discrete (DMT) Transmission → calculation prove जैसा uplink- (उपग्राही) AT downlink/stream to (उपग्राही) → उपर्युक्त diagram / process draw करें calculation करें prove वास्तव में होता है।

Slide-4] Cellular Network:

- cellular N. describe → Traditional को बहुत थोड़ा then ...
- Cell shape - 3 criteria (कर्तव्य शाप डेक्सागोनल).
- Components (All description)
- FDD & TDD → channel (control & traffic)
- Frequency reuse.
- Fixed & Dynamic channel assignment.
- (math)

Slide-5

→ Handoff, Handoff margin, A explanation.

→ Hard, soft handoff.

→ Handoff initiation a technique.

→ Hand off decision.

→ Prioritizing handoff → Any জাইতা ফি ৬২
description থাকিবে।

→ How to handle Practical Handoff situation.

Slide-6

→ Interference → co-channel distance measure.

→ $\frac{N \otimes \text{CCl}}{\text{Capacity}} \rightarrow \text{analysis}$.

$$\frac{N \otimes \text{CCl}}{\text{Capacity}} = \frac{\uparrow \uparrow \downarrow \downarrow}{\downarrow \downarrow \uparrow \uparrow}$$

অন্যথা তার CCl বাহুর, N গড়ে, 3 technique.
 ↳ cell splitting ↳ prove type
 ↳ cell sectoring ↳ description
 ↳ microcell zone concept থাকবে

→ CCI relation with SIR (Prove রয়েবে)

$$\frac{S}{I}$$

→ শাখিমূল গোচর (ACI) কোম্পানির সাথে মুক্ত (Near-far Effect)

Slide-7

କୌଣସି ମୁଣ୍ଡ ମାତ୍ର B & C ଚାର୍ଟ

ନୋଟ୍ ରେ ପାଇଁ କୌଣସି ମୁଣ୍ଡ ମାତ୍ର

(କୌଣସି ମୁଣ୍ଡ ମାତ୍ର କୌଣସି ମୁଣ୍ଡ ମାତ୍ର)

କୌଣସି ମୁଣ୍ଡ

(କୌଣସି ମୁଣ୍ଡ ମାତ୍ର କୌଣସି ମୁଣ୍ଡ ମାତ୍ର)

(କୌଣସି ମୁଣ୍ଡ ମାତ୍ର)

(କୌଣସି ମୁଣ୍ଡ ମାତ୍ର)

(୧୦,୧୦) b

{୧୦,୧୦} A

(୧୦,୧୦) b

{୧୦,୧୦} C

(୧୦,୧୦) b

{୧୦,୧୦,୧୦} D

DIP

Final suggestion

→ Histogram এ ques quiz মতোই আছবে।
→ chapter - 10 reasoning segmentation বাত

→ chapter 1, 2 বাদ,

→ ক্লেন chapterে overlap হবে না।



* Lecture, 1, 2, 10, 15 টিক্কে HGT. বাত

Lecture-18 বাদ

* 14 - lecture → Frida ... must সত্ত্বে হজে

* Thinning & thickening বাদ

14/20

15/20

16/20

17/20

18/20

19/20

20/20

Lecture - 3 (smoothing · spatial) chapter

* Filtering → ফিল্টার ওপর

Step দ্বারা করা।

* Sharpening - lecture

→ Derivation বাদ

→ LAPLACIAN, SOBEL, P...

↑
2nd derivative ↑
1st

→ Robert বাদ,

* Image segmentation (Part-1) Edge detection

বাকি ইউনিট বাদ।

→ Canny Edge detection অবচেষ্ট্য important.

○ Xn-6 math partial এজেন্সে।

* Color image Processing. (^{slide} 32 অঙ্ক বাত্য অব)

→ color model, vision, Primary Colors, secondary,
additive, subtractive, RGB color mode, color ~~cube~~ cube

অঙ্কণ করা।

→ RGB vs CMYK

→ Previous year ques.

80 Mathematical Equation तर वर्णन of Erosion & Dialation.

✳ Thinning & Thickening → एवं Quiz & final প্রশ্নগুলি

{ ✳ corner detection, End Point detection. } Quiz-6
→ Hit, miss
→ structural element } just output
সমাধানের পথ,

✳ Dialation, E, O, C → Definition, फ़िल्टर का
কাউন্ট,

→ input, output, structural element.
→ no description que for quiz.
→ just mathematical equation.
→ output কি কোন ওভেনিয়ে, perfect edge ফার্মে
ওয়াচু।
→ 2-3rd year's final প্রশ্নগুলি ques sample আছে।