

Topics for CIA-3

Prescribed Textbook

1. Kevin P. Murphy, "Machine Learning: A Probabilistic Perspective", The MIT Press ,2012
2. C. Bishop, Pattern Recognition and Machine Learning, Springer, 2007.
3. Jiawei Han, Micheline Kamber, and Jian Pei. Data Mining: Concepts and Techniques, Morgan Kaufman, Third Edition, 2012

We are in 2024!

For easier illustration and examples, you may ask ChatGPT, GeekforGeeks or any other source. I am not expecting anything that is not discussed in the class. All the best!

Feedback

I understand that it was hard for you all to prepare from the textbook. **I will do my best to provide notes or specific content to study for CIA-2 and CIA-3. Thanks.**

UNIT-IV

1. Clustering Methods
 - a. Importance, challenges, parameter estimation of clustering data.
 - b. Distance based Clustering techniques
 - c. Density based Clustering techniques
 - d. Partition based Clustering techniques
 - e. Evaluation of clustering algorithms - problems based on this. (5 mark)
 - f. Comparison of clustering techniques (5 mark)
2. Outlier Analysis and detection
 - a. Clustering based detection
 - b. Extreme value detection
 - c. Statistical analysis based detection - problems based on this. (5 mark)
 - d. Density based detection
 - e. Distance based outlier detection
 - f. Comparison of outlier detection methods. (5 mark)

Bonus: Artificial Neural Network - problems based on this.

Point Distribution: Unit-IV 50 points

Format:

Part A, (5 mark questions), $2*5 = 10$ points

Part B, (10 mark questions), $4*10 = 40$ points

Total = 50 points